

BILLY
AND JANE
EXPLORERS
SPEED

BOOK II



Property of Hist. 51

Grade 3

BILLY AND JANE

EXPLORERS

BY

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LOUISVILLE, KENTUCKY

*Illustrated from photographs
taken by the author*

BOOK II

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PREFACE

Education in life is gotten almost entirely by observation. Each and every child before school age and during school age is busy taking photographs with the wonderful pair of lenses which are commonly called eyes. These clear cut pictures are carefully put away in the child's mental photograph album for future use.

The child talks enthusiastically about these vivid pictures with other children; but rarely speaks of them or uses them in the school room. Naturally the child fails to use this wealth of imagery in the classroom for he has learned that books largely hold sway in school. On the play ground his imagery is continually brought into action. The average child believes in the value of his photograph album in playing games and in chatting with playmates; but never thinks of turning over its valuable pages when he sits down to write or to think. He has an idea, a fairly well developed idea, that he had better stick to books for there he is certain he can secure cut and dried information and be able to pass examinations.

“Billy and Jane” was written to interest children in their own every day environment. It was written to give the child an idea of the value of his photograph album. It was written with no idea of giving the children a certain amount of information in the study of the out-of-doors.

Billy and Jane chatter through the book as normal children should chatter. They chatter about the things, the ordinary things, they see and hear. And as Billy and Jane chatter, the child reading the book begins to turn the pages of his own mental photograph album. He unconsciously arranges and re-arranges his own pictures so he may enjoy what Billy and Jane are doing as they explore things. This arranging of impressions and images not only has value in making available the child's own images; but it also has the added value of giving the child a desire to express what he has seen and heard.

Each and every child in every classroom everywhere has an untold and unused stock of mental imagery. This imagery has quite naturally been picked up in a haphazard manner. It has never been brought out or utilized in any way in school. It is the teacher's duty and privilege to allow the child the joy of understanding the value of what he has obtained through his senses.

The child in school and out of school draws; he paints; he cuts out with scissors; he carves; and he talks. These modes of expression are almost as old as the race itself and the child delights in using them to reproduce his imagery. He likes immensely to feel that his imagery has filtered down to his finger tips and can be reproduced. However, when he comes to write, he becomes clumsy. Somehow or other, writing as a mode of expression is so recent. He fears it and this fear is increased by his desire to write in good form. In other words, he believes English is form and not a tool of expression like drawing, painting and talking.

After all is said and done, each teacher must realize that the real education of a child is not entirely a matter of securing information, no matter how valuable it may be. But that the education of the child is to a certain extent the organizing of a wealth of imagery so it may be used readily and with certainty.

“Billy and Jane” can help the adroit teacher at this point. The book can help her because the children reading the book are sure to wish to tell their own experiences in the out-of-doors. It may be well to allow them to do a little talking. Then while the enthusiasm for self expression is at its

height, the children may be asked to write about what they have seen and heard in park, in back-yard or on the farm. But the adroit teacher will strive to give the children a real opportunity to know that English, written English if you please, is a tool of expression and not entirely form. She will ask the children to write rapidly on scratch paper in the classroom what they know. She will tell her children before they begin that she will mark them merely for the story they are able to give and that later they can have their stories back to re-write so they may correct them.

“Billy and Jane” is a supplementary reader. It should be read by the children for the pleasure it gives them. This does not in any way keep the teacher from using it for written and oral English which will bring into the classroom the imagery that children usually keep for their own pleasure and the pleasure of their playmates.

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Billy and Jane, Explorers

CHAPTER I

BILLY ARRIVES

The north wind whistled in the tree tops. Dark clouds hurried above the trees. Now and then a flake of snow came floating down.

Billy and Jane came out into the big front porch. As he turned up his collar, Billy said, "My, I'm glad I'm here again. And only a few days until Christmas, too. Didn't we have a good time last summer, Jane? And didn't we do a lot of exploring?"

The children walked to the edge of the porch. A big snowflake settled on the end of Jane's pink nose. As it melted quickly, she exclaimed, "My, but it's cold! I wonder what the birds are doing in the park. And I wonder what our good friend, the Colonel, is doing, too."

"I don't believe we could find any birds today. It's too cold," answered Billy. "Of course, we saw ever so many birds last summer. We could

explore then because it was warm and nice. But look down the road in the park. There isn't a green leaf on the trees. I don't believe it would be any use to try to explore anything."

Jane leaned against one of the big posts on the porch. She looked down the road among the trees. Suddenly she turned and smiled at Billy. Again she looked down the road and asked, "Why not try, Billy? We could have a walk anyhow."

"Do you think the Colonel could tell us something to explore?" questioned Billy. "You don't believe we'd find any birds?"

Jane laughed as she ran by Billy. He followed her as she raced into the hall. In a moment Jane was inside of her heavy coat. She buttoned the coat quickly. As she pulled on her warm gloves, she exclaimed, "Get ready! Hurry up! Don't stop to talk! Let's see the Colonel as soon as we can. Let's have him tell us what we can see."

The fresh crisp air stung their cheeks. Their breath turned white in the frosty air. Stray flakes of snow touched their faces and melted. They raced around a turn in the road. Suddenly Billy said, "It's fine fun to be out of doors, Jane. Even if we don't see any birds."

Jane skipped faster and shouted, "Everything

is beginning to look like Christmas. All we need is some snow."

Billy, running close by her side, laughed and nodded his head. Turning into the park, he exclaimed, "There's the old Colonel's little guard house. And there's some smoke coming out of the little chimney. That means he's at home. Maybe he can tell us about something to explore even in cold weather. If he does, you and I'll have to hurry. You see, we have only two weeks of Christmas vacation. Two weeks go very fast."

The little door in the little house opened. A man in gray uniform came out. He had a basket on his arm, but it was not the Colonel. Jane ran up to the guard and asked, "Where's the Colonel? Billy and I came to ask him some questions. We thought you were the Colonel."

"The old Colonel is sick," answered the guard. "I'm going out to feed his pets now. You see I have his little basket of food. The birds and the squirrels will be waiting for me. Can I do anything for you?"

"Yes," answered Billy at once. "Last summer the Colonel taught Jane and me to explore the park. We had a wonderful time. He even taught us to find birds' nests on the tops of big buildings

in town. But if he isn't here we can't do anything. It's too bad, and it will spoil our Christmas vacation."

The guard pushed his cap back on his head and smiled. He kept on smiling as he looked at the children carefully. Putting his basket on his other arm, he said, "Come along with me. Do you know, the Colonel taught me to explore the park, too. And he taught me how to feed the birds and make them my friends."

"But," interrupted Billy, "you're a grown man. I didn't know grown people ever explored parks. Boys and girls explore parks."

"Well, I'm exploring something every day," said the pleasant guard. He led the children down the road some distance. A queer small noise floated down from the trees. Several times Billy and Jane looked into the tree tops. They could see nothing. The guard stopped and pointed to a small cleared spot by the road.

"There's one of the places where the Colonel fed his birds," said the man. "The birds knew he would come with food when the weather was bad. You heard that queer little sound, didn't you? I saw you look for it, but you didn't see anything. I'm going to let you see the little bird. He's up in the tree waiting for his dinner of pea-

nuts. Here goes a piece of peanut on the ground.”

The guard tossed a peanut into the cleared space. At once there was a flash of dull blue-gray wings. A very small and rather flat bird picked



“A very small and rather flat bird.”

up the nut. Then it flew on to a limb above the guard's head. Carefully the bird placed the nut in a crack in the bark and with its sharp bill it ate the peanut. In a moment it had finished eating. Then it began asking for more in a thin, queer, squeaky little voice. ✓

“That bird made the noise, didn’t it?” asked Jane.

“And what’s its name?” asked Billy. “I never saw a bird like it. Did you, Jane?”

“I think I saw one once. I believe the Colonel said it was a nuthatch,” answered Jane, slowly.

“That’s what it is,” announced the guard. “They’re only here during the winter time. That’s the reason you didn’t see one last summer. Look at the one on the side of that big beech tree. See how he runs along upside down.”

Billy and Jane watched the small birds for some time. At length Billy nudged Jane quietly. When she turned, Billy grinned delightedly and said, “My, isn’t this splendid? Here we are again exploring even if it is winter time. Of course, it won’t be like last summer. But it will be exploring.”

The park guard rapped on the hard road with his billy. Then he looked into the trees along the road. Again he rapped until the sound echoed among the trees.

“Jane,” asked Billy, “is he calling Redhead? Don’t you remember the Colonel called Redhead that way last summer?”

Before Jane could say a word, the guard said, “No, Redhead left as soon as the weather turned

cold. Redhead won't be back here until spring comes. I'm rapping to call some of the other birds. And sometimes on good winter days the squirrels come to feed, too."



"He runs along upside down."

"Oh!" exclaimed the children, "does Mother, the little ground squirrel, come? Some people would call her a chipmunk. The Colonel showed us Mother last summer."

"No," said the man, "Mother is sound asleep

in her nest under ground. She'll be out again next spring. The squirrels that feed during the winter are just common gray squirrels. They are the squirrels that sleep in holes in trees."

Some new soft notes came from the trees. The children saw three small birds hopping from limb



"We called them the Peter-Peter birds."

to limb. They seemed to be watching the guard with their bright, black, beadlike eyes. And as they talked softly to the man below, they lifted their pointed crests. One bird flew on to a limb just above the guard's head.

At once Jane exclaimed, "Of course, I know those birds. Billy, look at them. Why, the Colo-

nel showed us their nest in a knot hole in a maple tree. Don't you remember?"

Before Billy could answer Jane, one of the birds was on the ground. It flew into a tree carrying a bit of peanut. Then Billy's face spread into a broad smile. He said, "Yes, I know. We called them the Peter-Peter birds, didn't we? And we saw their young ones getting ready to fly away. My, but I'm glad we came out. We can do some exploring after all, can't we, Jane, even if it is cold weather?"



CHAPTER II

A HARD NUT IS CRACKED

At breakfast the next morning, Jane said, "Billy, let's buy some peanuts. Then we can take them to the guard in the park. Don't you want to explore some more? Perhaps we might see the squirrels the guard said he fed."

"Come on," Billy announced. "I'm through with my breakfast now. We can get the peanuts from a store in a few moments."

The children got a big bag of peanuts. Then they ran down the road into the park. In a few moments they found the park guard. He had his basket of food on his arm. When he saw the children, he said, "I'm glad you've come back again. I hope you'll let me help you explore some. I don't know as much as the Colonel does. But I have been exploring the park for a few years. I am sure I can show you some things."

"That's fine," answered Jane.

"We haven't asked your name," Billy said quickly. "But I don't believe we need to know

your name. Will you let us call you Captain? We called the other guard the Colonel. And as he knew more than you, that makes you Captain, doesn't it?"

The guard threw back his head and laughed. Then he put his heels together and saluted the children. Again he laughed and said, "Why, of course, you can." Then he saw the big bag of raw peanuts and asked, "Are those peanuts? My, but I'm glad you brought them. I was just about out of peanuts and my pets will be hungry. And you got them raw. That's fine. The birds don't like them so well roasted."

"Yes," answered Jane. "Billy and I got them after breakfast this morning. Can we carry them and go with you? We saw some birds yesterday. And we want to see them again close to your feet. Do you think we could?"

"And how about some squirrels?" Billy asked. "You said they came for the peanuts, too, didn't you?"

"I'm certain we can find some birds," the guard answered. "And I hope a few squirrels will be hungry. I have a fat gray one that's very tame."

"How tame is 'very tame'?" asked Jane.

"Never mind," replied the Captain. "We'll

find the fat squirrel. And then you can see how tame 'very tame' is."

The wind whispered among the bare branches over head. Near by in a hollow a little stream murmured. The brown leaves on the ground rustled in the wind. And small patches of snow lay upon the brown earth.

They walked up the road to the top of the hill. Suddenly Billy exclaimed, "There's the shelter house. That's where the Colonel told us about Mother."

"And," interrupted Jane, "it's where we found the mud wasps' nests."

"And," continued the man, "it's where I feed my squirrels. And it's where I usually find my gray pet."

"Can you call him now?" asked the girl. "How do you call a squirrel? Do you call him like the Colonel called Redhead last summer?"

"Yes," answered the Captain. "Exactly the same way. Now watch me."

The man took his stick from under his arm. Stooping he rapped on the hard road. The sharp sound echoed among the trees. Three times he rapped with his heavy stick. Then he smiled and pointed to a huge beech tree. A fat, sleek, gray squirrel came slowly down the tree. It

stopped and looked at the children. Then it sat up on a big root. Again it took a good look at the boy and girl. ✓

The guard walked forward to a bench. He



It was on the guard's knee.

put one foot on the bench. In one hand he held a peanut, and slowly the squirrel moved toward the bench. The guard did not move. He still held the nut above his knee.

Jane opened her mouth to ask a question. Billy shook his head. The guard smiled and

said nothing. The squirrel was now on the back of the bench. In another moment it was on the guard's knee. It took the peanut in its mouth. Then it scampered away.

"My, but it's tame!" exclaimed Jane. "And now I know how tame 'very tame' is, Captain. How did you get the squirrel so tame?"

"Just like the Colonel tamed Redhead," replied the man. "Animals and birds like good food. We feed them. And we feed them in the winter. That's when it's hard for them to find food. Then they learn to know we mean food. So they come closer and closer to us. Some day they know we won't hurt them. And they also know we won't even touch them. That's how I've gotten my pet squirrel so very tame."

"Did you see that little bird?" Billy asked suddenly. "It flew over the Captain's head just now. It did the trick twice. But it didn't come near Jane or me."

"That was one of my nuthatches," the guard said. "I've had a nuthatch do that trick quite often. They have learned to know my gray uniform. They know gray means some food. That one was begging."

"Billy and I haven't any gray clothes," said

Jane. "So they don't notice us at all. Is that right, Captain?"

The Captain did not answer. But he nodded his head toward a tree. Again the squirrel was sitting on a big root.

"He wants some more nuts," the man explained. "I'm certain he has hidden the nut I gave him. He isn't a bit hungry today. So he'll save his nuts until he is hungry."

The squirrel watched the children. As they did not move, it ran toward the bench. When it jumped upon the bench, the guard said, "I'm going to give him a hard walnut. I just found one in my pocket. He likes walnuts better than peanuts."

The small gray animal held the walnut in its mouth. It ran quickly to the tree, and at once climbed up to a big branch. Sitting up it took the nut in its front paws. Its jaws worked rapidly, and a hard grating sound came down to the children.

Jane turned her head to one side to listen. Then she asked, "Does the squirrel make that noise with its teeth?"

"Yes," answered the man. "It's cutting a small hole in one side of the walnut. You can see the small bits of shell falling."

After a while the grating noise stopped. Quickly the squirrel turned the walnut about. Then its jaws worked rapidly once more. But no sound could be heard.

“What’s the squirrel doing now?” questioned



“A nice clean hole in each side.”

Billy. “It isn’t making any noise. It can’t be cutting another hole.”

“No,” answered the guard. “It has a hole in one side of the nut. Through that hole it is getting out the soft kernel. Squirrels use their long teeth for cutting. Then they use them as nut picks. It will soon have the kernel out. Then

it will turn the nut over. And it will cut another hole to reach the other half of the kernel.”

The man and the children watched the squirrel for some time. At last the walnut dropped. It bounced on the ground and rolled almost to their feet. The Captain picked it up and showed it to Billy. Then Billy said to Jane, “The Captain is right. Here’s a nice clean hole in each side of the walnut. And there isn’t any kernel left inside. My, but exploring is lots of fun. And we know we can explore things anywhere and any time. Just think, we are exploring the park and it’s midwinter. Of course, we can’t see as much as we did in the summer. But we are exploring.”

They walked down the road through the park. A few birds flew from tree to tree following the guard’s gray uniform. Again and again the birds begged for food in thin small voices.

At length Jane said, “I know they’re real greedy. I’d like to see them close again. Can’t you give them just a few more peanuts?”

The Captain put his hand in the small basket. He shelled a peanut and tossed it to the road. At once two small birds darted for it. As they reached the road there were shrill high notes. The birds came together and one flew away.

“Why,” exclaimed Jane. “Those Peter-Peter birds were fussing and fighting. I didn’t know your birds fought over the food.”

The corners of the guard’s eyes wrinkled into a little smile. Then he said, “Yes. I’m afraid birds are a good deal like people. They will fight every now and then.”

CHAPTER III

THE TELEPHONE RINGS

After supper the children sat before the log fire. As the orange blazes danced, Billy and Jane grew sleepy. Gradually the logs settled into a bed of hot, glowing coals. Jane rubbed her half-closed eyes with her fist. She said, "I was almost asleep, just now. Let's do something to keep us awake. How about popping some corn, Billy? The fire is exactly right for popcorn."

They shelled popcorn into a newspaper on the floor. As Billy shelled a second ear, he said, "The Captain's pets are wonderful."

"Yes, they are," answered Jane. "Do you suppose other people tame wild birds?"

Before Billy could answer, the telephone rang long and loud. He ran into the hall to answer the call. Jane sat on her heels and stopped shelling corn.

She heard Billy say over the telephone, "Yes, this is Billy."

After a pause, "You say Jane and I are to come tomorrow?"

Then, "Yes, I understand. We are to stay several days. We're not to come for just one day."

A delighted little giggle and, "My, that is fine. Jane'll be glad Thomas is coming to the station."

A longer pause and, "I didn't understand. What was it you said about the motion pictures?"

A still longer pause, and, "Yes. Yes. I heard you say educational motion pictures. But I didn't know you had motion pictures in Bluebird Valley. Good-night."

Jane was standing in the hall now. She had a little wrinkle between her eyes. At once she asked, "Was that Cousin Fanny? Does she want us to come to Bluebird Valley tomorrow? What did she say about the movies? Is Thomas there?"

"Yes, it was Cousin Fanny. And we're to come out to Bluebird Valley. You remember what a splendid time we had last summer. Thomas is there. Jane, I don't understand about the motion pictures. Cousin Fanny said they were educational motion pictures. All I know is she said so, and they'll be good ones."

The corn was all popped and eaten. Still

Billy and Jane talked about the trip of the next day. They both wondered about the motion pictures. They wondered what Thomas could find to explore in the winter. It was an hour past bed-time when they went upstairs.

They hurried through their breakfast the next morning. Their suitcases were quickly packed. On the way to the depot, it began to snow. By ten o'clock the interurban train was taking them to Bluebird Valley. Thomas met them at the station. Soon they were driving rapidly toward Cousin Fanny's big country home.

Jane leaned close to Thomas. She asked, "What are Cousin Fanny's motion pictures like, Thomas? Where has she put the screen in her house? I know she has motion pictures. She told Billy so over the telephone last night."

Thomas laughed; but he did not look at Jane. He kept his eyes straight ahead of him. Again he laughed as he said, "Did she tell Billy that?"

"Yes," answered Billy, who sat on the other side of Thomas. "But she didn't tell me anything more. Jane and I want to know what they are like."

"Ask your Cousin Fanny," Thomas replied. "We'll see her in about five minutes. You can certainly wait that long, can't you?"

Cousin Fanny was standing in the front door. She smiled and ran across the porch to meet the children. Billy, Jane, and Thomas were soon in the wide hall. On the way upstairs, Jane asked, "Where is your screen, Cousin Fanny?"

"What screen?" Cousin Fanny asked. She smiled quickly and continued, "Oh, I see. You want to know about my motion pictures."

"Yes," answered Billy. "We want to see your educational motion pictures. You told me about them last night."

"They're in my room on this floor," she replied. "I'll show them to you. You can see them as soon as you have finished your dinner. Dinner will be ready in ten minutes."

Thomas ate dinner with Billy and Jane. None of the children could eat much dinner. They talked about the exploring they had done the summer before. Billy and Jane asked Thomas what they could explore in the winter.

Thomas smiled at Cousin Fanny. Then he said, "We'll plan after you have seen the pictures. We might explore the pictures. Don't you think so, Miss Fanny? The snow is wet and we can't go out of doors."

The moment dinner was over, Cousin Fanny went upstairs. The children heard her bedroom

door open and then close. Later they heard her raise the window and shut it. Billy and Jane grew excited. Thomas grinned at them and whistled under his breath.

Cousin Fanny opened her door upstairs. Her voice came down to them, "You may come up now. The educational motion pictures are all ready for you."

Her door closed again as the children raced up the stairway. Jane pushed into the room first. Billy was at her heels. Thomas followed quietly. Billy and Jane looked about the room. There was no screen upon the wall. All of the windows were wide open. The room was filled with sunlight.

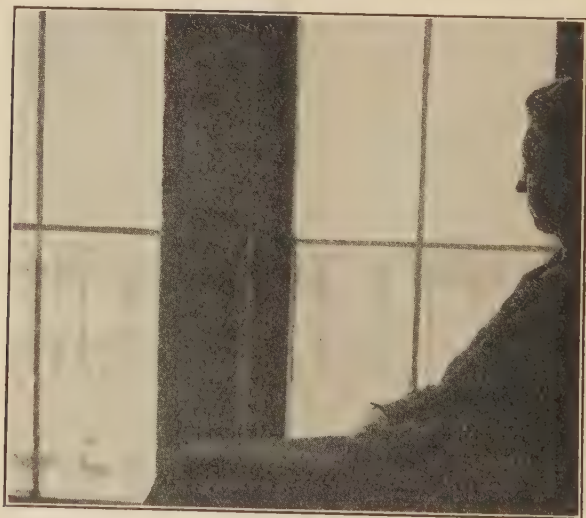
Cousin Fanny, who sat by a window, said, "Come here. Now look out of this front window."

They turned and looked. On the top of the front porch food had been spread. Birds were feeding within three feet of Cousin Fanny.

Jane caught her breath and exclaimed, "My! Billy, isn't it wonderful? We saw the Captain's tame wild birds yesterday. We wondered if any one else had done the same thing. And here they are. We can sit and watch them."

Billy sat close to the window. He smiled at

his Cousin Fanny. Then he said, "Thomas was right. He said we might do some exploring in the motion pictures. We can sit right in this room and explore things. No wonder you call them your educational motion pictures." ✓



Birds were feeding within three feet of Cousin Fanny.

"Cousin Fanny," Jane said, "how do you know the birds? I mean with white snow behind them? When I look at them, they all look dark. I can't see their colors."

"That's easy," Cousin Fanny replied. "Look

out there now. That little bird eating the suet is a nuthatch. You can tell him by his long sharp bill. Then, too, he's small and flat looking."

"What's the big one?" Billy asked. "The big one that just flew down. See, he's eating the cracked corn. He doesn't eat the suet."

"Just one of my big fine cardinals," Cousin



Nuthatch and Cardinal.

Fanny said. "It's easy to know him anywhere. See what a crest he has. And look at his big heavy bill. It isn't a bit sharp. He uses it for cracking seeds. It's very different from the nuthatch's bill."

"Cousin Fanny," Jane asked, "how long have you been feeding the birds? I mean up on this front porch."

“Oh, ever so many years,” she answered. “It must have been twelve years. I put out suet for some of my birds. I scatter corn for some others. And I crack walnuts for a change.”

“The Captain told us the same thing,” Billy announced. “He and the Colonel have been feeding the birds ever so long. But I believe your way is better, Cousin Fanny.”

“Why, Billy?” asked Cousin Fanny.

“Why, because you can sit in your own room and see them,” Billy replied. “You don’t have to go outdoors. All you have to do is to put out some feed. You can read or sew and explore, can’t you?”

“Yes,” replied the sweet-faced lady. “And that’s one reason why I call them educational motion pictures.” ✓

“What’s the other reason?” Billy asked at once.

“I’ll have to tell you that later. I may not tell you for several days. But I will tell you before you and Jane leave,” Cousin Fanny replied.

“Billy,” Jane whispered. “Stop talking so much. Watch the birds feeding.”

Billy turned around facing the window. He and Jane moved forward slowly. With their

faces against the window, they watched the birds. The cardinal was eating corn. The nuthatch dug into the soft suet with his stout bill. Suddenly the birds stopped eating. They looked toward the end of the porch. The children looked and



The big flicker will eat some suet.

saw a large bird. It was on the railing about the porch. It flew on to the suet. At once the other birds flew away.

“The other birds will come back, won’t they?” Jane asked.

“Oh, yes,” Cousin Fanny replied. “The big

flicker will eat some suet. Then he'll fly away again."

"What did you call it?" Billy asked.

"A flicker," Cousin Fanny said. "Some people call him high holer. The books call him the golden winged woodpecker."

"He's beautiful," Jane whispered. "And, Billy, look at his long bill. It's built for suet and not for corn."

No one said a word for some time. The flicker ate all the suet it wanted. When it flew away, a small bird came. It picked up a piece of broken walnut. It tried to pull out a kernel. The kernel was hard to pull out. The bird took it in its bill. It flew on to a big piece of suet. Then it hammered the walnut up and down.

Billy touched Jane. She looked at him and grinned. Then Billy asked, "Do you know that little bird?"

"Of course I do," Jane answered. "It's one of our Peter-Peter birds. He looks like a little cardinal. But we know he's gray. And we know a cardinal is red."

Billy leaned against the side of the window. He smiled at Cousin Fanny. Then he said to Thomas, "What's the matter? You haven't said

a word. And you were our guide last summer when we explored things."

"There wasn't anything to say," Thomas answered. "You and Jane have been watching the birds. Tomorrow I'll take you in the auto-



"It's one of our Peter-Peter birds."

mobile. I'm going to have a man show you a new kind of exploring. I mean if the weather is good. We can't go if there is snow on the ground."

CHAPTER IV

A TRUE FAIRY STORY

For two days the rain came down in sheets. Cousin Fanny's motion pictures were not interesting. The birds looked very wet and forlorn. Billy and Jane grew tired of the house. The third day Thomas came to spend the morning.

"When can we begin exploring?" Jane asked. "I never was so tired of the house."

"Tomorrow," answered Thomas. "That is, if it doesn't rain any more."

"It hasn't rained for an hour," Billy announced. "The sun came out for a little while. I believe the rain is over. But, Thomas, can't we do something today?"

"We might have a story," Thomas suggested. "Your Cousin Fanny tells wonderful stories. Don't you remember last summer? She told you about the cowbirds, how they lay their eggs in other birds' nests. And she showed you pictures in her album. One was a sparrow's nest with a cowbird's egg in it."

“Yes, of course, we remember!” Jane exclaimed. “She’s in her room now. Let’s run upstairs. And Cousin Fanny can tell us a story.”

Cousin Fanny was waiting for the children. She got her album when they asked for a story. Then she said, “What kind of a story shall I tell you?”

“A true story,” Billy announced at once.

“A fairy story,” Jane said at the same time.

Cousin Fanny smiled. And she suggested, “How about a true fairy story? Then both of you will be satisfied.”

“I never heard of a true fairy story,” Jane replied. “But I believe I’d like it. It sounds interesting.”

Cousin Fanny turned several pages in the album. Billy was looking over her shoulder. Suddenly he asked, “Whose picture is that? That one of a man without any hat on? Is that a big bird’s nest in his hands?”

“I’m glad you asked about him,” Cousin Fanny replied. “I heard Thomas say he was going to take you to see him. Am I right, Thomas?”

“Yes,” answered Thomas. “He’s going to

teach us a new kind of exploring. I told Jane and Billy about him. We are going to see him."

"When?" asked Jane.



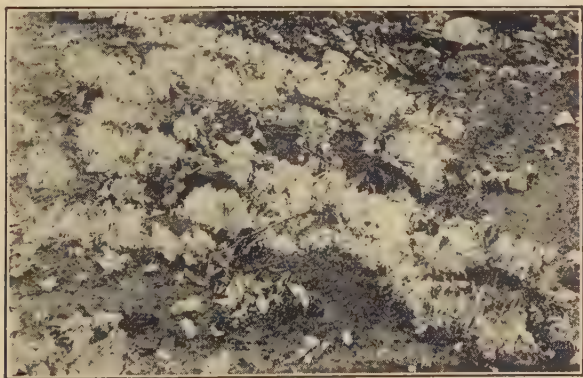
"We always call him the Pioneer."

"Tomorrow, if it doesn't rain," Thomas answered.

"Is that a big nest?" Billy asked again. And he pointed to a picture in the album.

"No," said Cousin Fanny. "It's a small nest."

But the bird had to make it fill a big pan. A house wren built it. The pan was in the man's chicken house. Now I'm going to tell my true fairy story. Then Thomas will take you to see the Pioneer tomorrow. We always call him the Pioneer."



"Bits of thin ice stuck out of the wet ground."

Cousin Fanny turned some pages. Then she said: "Thomas and I went exploring early last spring. We didn't expect to find any true fairy story. But we did find it on the bank of a brook.

"The night before had been very cold. Little bits of thin ice stuck out of the wet ground. These pieces kept breaking under our feet. They made a crisp, crunching noise.

“We came to a small open space. In this space were some long pieces of ice. They were all twisted and curled up. They were very queer looking. Thomas picked one up. It melted in his hand almost at once. He got another one



“They were all twisted and curled up.”

and handed it to me. I put it in my mouth. I found I could blow my breath through it.

“Then Thomas put one in his mouth. He could blow through it, too. We gathered several of them. And each piece of ice had a hole through it. Thomas wondered what they were. He said, ‘I don’t know what they are. They

look like fairies had made them. But they look like straws, too. You know a straw has a hole through its center. You don't suppose they are ice straws, do you?"

"Of course, I laughed at what Thomas said. I told him not to be silly, but to run back to the house and get my camera. I wanted pictures of the ice straws. I knew I'd need them if I told any one about them. When he got back we took these pictures."

Billy and Jane looked at the pictures. Then they looked very much puzzled. Again they looked at the pictures. At length Billy asked, "Cousin Fanny, what are they? Jane and I haven't an idea what they are."

"I can't tell you just now. That would spoil my true fairy story," Cousin Fanny continued. "Thomas wanted to know what they were. So he got out his knife to dig the ice straws up. As he dug, he said, 'I'm going to find what makes them grow. They look like fairies had planted some ice seed in the ground. And then the ice seed grew up into ice straws.'"

"Thomas dug up a big ice straw. There was a dark something fastened to it. We broke the small dark something off. It wasn't an ice seed at all. And no fairy had planted it."

Cousin Fanny opened her album. She pointed to a picture of a piece of ice. And she said, "Here's a picture I took of the fairy ice straw. Can you tell me what is fastened to it?"



"There was a dark something fastened to it."

Billy and Jane looked closely at the picture. Both of them shook their heads. Again they took a good look at the photograph. At length Jane asked, "What was on the end of the fairy ice straw?"

"Just a common weed seed," Cousin Fanny

answered. "It was the seed of a horse weed. That's what the farmers call the weed. Its real name is the 'giant rag weed.' It grows very tall along the banks of streams."

"But," asked Jane, "how could a weed seed grow into an ice straw?"

"That's what Thomas and I wondered," Cousin Fanny replied. "We wondered how ice could grow from a seed. And that's why I am telling you a true fairy story. We dug up a dozen ice straws. At the bottom of each straw was a horse weed seed. On the way home, Thomas asked me, 'How can ice grow out of a seed? What's in a seed, anyhow?'"

"And I couldn't tell him," Cousin Fanny continued. She turned to Billy, and Jane asked, "Could you tell Thomas what's in a seed?"

"No, we can't," Billy answered.

"I know there's food. You see, we eat corn and beans and other seeds," Jane replied.

"Well," said Cousin Fanny, "we thought perhaps it might be the baby plant in the seed. Of course, if there are baby plants, they have to have air. There isn't much more to tell, and I'm going to let Thomas tell you what we found out."

"I didn't find out anything," Thomas began.

“Your Cousin Fanny and I talked with Jack. Jack’s my brother and he’s away at school. He knows ever so much about plants. So when we told him about ice straws, he laughed. Then he said there was a plant baby in every seed. And it’s asleep and stays asleep all winter. When the weather gets warm, the babies begin to wake up. They breathe a little bit more and—”

“But,” interrupted Jane. “Please tell us how plant babies grow into ice straws.”

“They don’t,” Thomas answered at once.

“Then,” asked Jane, “how do ice straws grow?”

“They grow round the breath of baby plants. That’s why we found them on a cold day in early spring,” Thomas replied.

“Cousin Fanny,” Billy asked, “is Thomas telling the truth or not? You said it was a true fairy story, didn’t you?”

“Yes,” she said, “every word is the truth. Explorers ought to know very strange things happen.”

“Well,” continued Thomas, “the baby plants were just a little bit awake. They were breathing slowly early in the spring. When the sun went down, it grew cold. As the moisture came

out of the warm ground it froze. That made the little pieces of ice sticking up everywhere.

"Where the baby plant breathed, the moisture froze with a hole in the center. The hole was where their breath went up. It could freeze



"You can see the seed at the bottom."

about their breath. But it didn't freeze their breath."

"What made them get twisted?" Billy asked. "Why didn't they grow straight up? Look at these pictures you took."

"Because," Thomas answered, "the wind was

blowing. When there is no wind they grow straight. Your Cousin Fanny has a picture of one. We put it against the side of a tree. You can see the seed at the bottom. And you can see the hole through the center of the ice straw. It goes from the top of the seed right up."

"Could we find any ice straws now?" Billy asked.

"No," replied Cousin Fanny. "It isn't spring-time. Baby plants are all asleep. They are breathing a little, but it's too little to make ice straws. It takes springtime and cold nights."

Jane shook her head. Billy smiled, and said, "We did some exploring last summer. We did more exploring in the park. Now we've begun a new kind."

"Yes," remarked Jane. "And Thomas tells us about another kind. And a man is going to show us how."

"We could wake up some plant babies," Cousin Fanny said. "But you are to be here just a few days." She stopped and then continued, "Next summer we'll explore. You can come and stay two weeks. Maybe you can stay three weeks. Then we'll explore and learn more about plant babies. And Jack will be here, too."

“We won’t forget,” shouted Jane and Billy.

Then Thomas announced, “Look out of the window. The sun has come out. Tomorrow we will see the Pioneer. Then we will do some more exploring.”

✓

CHAPTER V

THEY VISIT THE PIONEER

The big automobile swung into the drive the next day. Billy and Jane saw Thomas on the front seat. They at once ran out and climbed into the machine.

"It's the new exploring today, isn't it?" Billy asked.

"Yes," replied Thomas. "But where is your Cousin Fanny? Isn't she going with us? There's lots of room for her."

"No," answered Jane. "She says she has to wrap up her Christmas presents. She said we didn't need any guide but you, Thomas."

The automobile turned slowly in the driveway. Then it hurried through the front gate. And Billy asked, "Which way do we go today?"

"We drive down to the creek," Thomas answered. "Then we cross Red Bridge and go up a long hill."

"Is it the creek we went to last summer?"

Jane asked Thomas. "The one where we found a wood thrush's nest? And where we saw the snake play dead?"

"Yes," he replied. "But we don't stop on this side. We go over Red Bridge. The Pioneer lives about a mile from the creek and we have to have him."

"Oh," said Billy. "He's the man you told us about. And the one whose picture I saw in the album. He's to show us a new kind of exploring, isn't he?"

Thomas nodded his head and smiled. The automobile swung around a sharp curve. Then Thomas explained, "First I am going to take you to the Pioneer's home. You must see his big collection. Then you will be ready to learn his way of exploring."

"A collection!" Jane exclaimed. "I do like collections. Is his collection birds or eggs or stamps?"

"It is none of those," Thomas continued. "I'm not going to tell you what it is. It's to be a real surprise. All I can say is, it is a big one."

The automobile glided smoothly along the broad white road. The clear, cold, wintry sun shone brightly. Big brown fields swept by them. Now and then a crow cawed in the distance. The

wind made rough noises in the bare tree tops. And the cold telephone wires sang in the crisp air.

"All the birds were singing last summer," Jane said. "Now I hear only an old crow."



"There's the Pioneer's little house."

"Everything is different from last summer," Billy announced.

The automobile raced across Red Bridge. It grumbled as it climbed the long hill. At the top of the hill they stopped.

"There's the Pioneer's little house," Thomas said. And he pointed to a brown roof close by.

Again the engine purred and the automobile ran up the road. It stopped in front of the house.

The three children got out of the automobile. As they went through a small gate, the Pioneer came to meet them. He smiled when he saw Thomas. And he said, "Got some friends with you, Thomas?"

"Yes," Thomas replied. "And they have come over to see your collection. Miss Fanny told them to come to see you, too."

Again the man smiled quietly. He opened a door in his small home. The moment Jane entered she caught her breath. Billy did the same thing. For a moment neither of them could say a word. But their eyes swept the four walls of the room. A second time they looked about them.

"Billy," Jane asked, "did you ever see such a big collection?" Then, turning to the man, she continued, "Where'd you get them? There must be thousands of them."

"Yes," exclaimed Billy. "Where'd you get so many? I never saw so many Indian arrow-heads."

Jane turned completely around. Again she said, "Why, every wall is covered. Where did

you get them? And look, they're piled against the wall. And there are others in boxes."

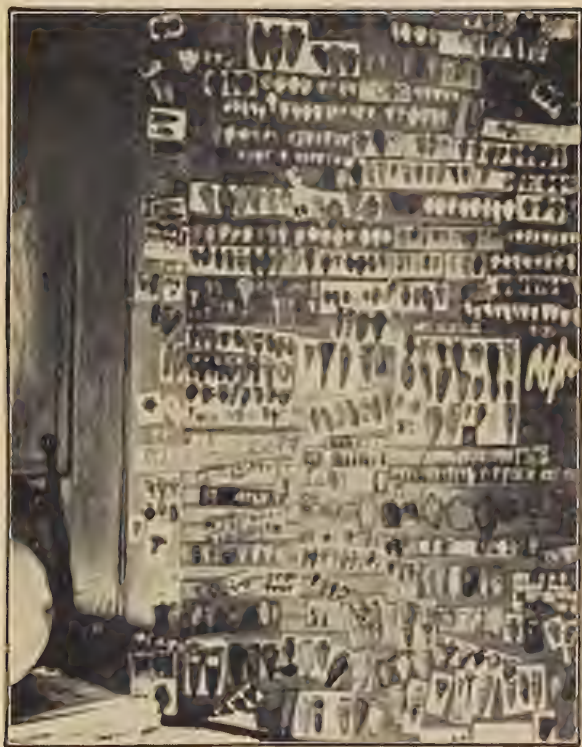
The Pioneer was still standing by the door.



"I never saw so many Indian arrowheads."

His eyes were smiling pleasantly. And so were the corners of his mouth. He walked over to where the children stood. Then he said, "I found

most of them around here. I've been collecting them for a long time."



"Why, every wall is covered."

"I should think so," Jane said. "But where do you find them?"

"Everywhere," the man replied. "I find most of these spearheads where a big battle was fought. Of course, I know just where to look for them. The Indians hunted and fought all about here."

"Who told you about the big battle?" Billy asked quickly. "The battle was ever so long ago, wasn't it?"

"Nobody told me about the battle," the man replied. "Of course, the battle was ever so long ago. But I can tell a great deal about it. I know from what I find on the ground."

"I don't understand," Jane said. "What do you mean? What do you find?"

The soft smile again swept across the man's face. He picked up a long, sharp, flint spearhead. Holding it in his hand, he said, "I found this early today. I found it in a field close by here. In that field I have found hundreds of them. This is the head of a war spear. So, of course, I know a big battle was fought there ever so long ago. It was before the white men came."

A number of relics were piled about the room. Thomas picked up two of these. Holding them, he asked, "When did you get these?"

"Since I last saw you," the man answered.

“That’s a mortar and pestle. Corn or acorns were put in the mortar. And they were ground up with the heavy pestle. I found them where the Indians camped. It was below the battle-field.”

“And they had to grind meal that way?” Jane asked. “Just a handful of corn at a time?”

“Yes,” the man replied.

“Cousin Fanny was right!” Jane exclaimed. “This is a new kind of exploring. My, but I’d like to find a spearhead. I mean out in a field. It would be wonderful, wouldn’t it? Then I’d be the first person to touch it. I mean, of course, since an Indian used it.” Then, turning to the Pioneer, she asked, “Could I do that?”

“Why, of course, you could,” the man answered. “I’m sure Thomas wanted me to take you out. Your Cousin Fanny told you I had explored the country. Didn’t she?”

“Yes, she did,” Thomas replied. “Would it be too wet today to do some exploring? I wondered, because it rained yesterday.”

“That’s the reason I want you to go,” the Pioneer said. “When it rains hard, it washes the soil off the arrowheads. Wait until I get my hat and we’ll go.”

While the man was away, the children again looked about. On one window ledge there were several boxes. They were open and Jane peeped into them.

“My!” she exclaimed. “Just take a look at these. Here are beautiful little arrowheads. They are all kinds of colors. Some of them look like agate. They look like toy arrows. I wonder if Indian children played with them.”

The Pioneer came back into the room. He saw the children looking in the boxes. So he said, “I forgot about those arrowheads. Aren’t they beautiful? Those are made of agate and other colored stones. They were made for the little Indian boys. They were fastened to the ends of tiny arrows. And the arrows were shot at small birds or targets.”

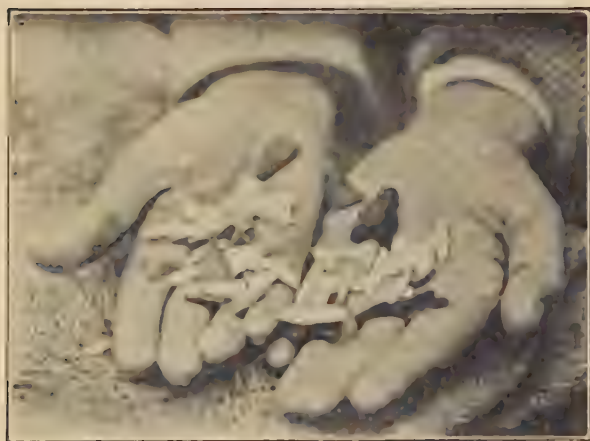
“May I take them in my hand?” Jane asked.

“Certainly,” the man answered. He picked up a box and poured them into Jane’s hands. Then he continued, “Those little savages did not know our Christmas. But their fathers and mothers loved them. Their fathers taught them to hunt and fish. These toy arrowheads were presents to the boys.”

“What wonderful exploring you do,” Billy

said to the man. "Thomas told us you could show us a new way. We had been exploring in the park. We had explored around Cousin Fanny's place. But that was just birds and other things. This is exploring like men in big colleges do. It's almost like digging up old cities, isn't it?"

The Pioneer's smile widened until his teeth



Poured them into Jane's hands.

could be seen. He opened the door. When the children were in the yard he said, "In ten minutes we'll be there."

“You mean on that big battlefield?” Billy asked.

“Yes,” he replied. The engine purred softly again. More brown fields swung by; but no one talked.

CHAPTER VI

JANE FINDS A RELIC

A ten-minute drive brought them out on a ridge.

“Here’s where we leave the automobile,” the Pioneer said. “We’ll have to walk to the battle-field. The battle was on that field below us. You can see it. It’s covered with shocks of fodder. And you can see the creek in the valley.”

It was some distance from the road to the field. The field lay a little way above the creek. And it sloped up to a few big trees. When they stood in the field, the man said, “Look where I point. Do you see those trees?”

The three children nodded their heads. And the man continued, “A long time ago a band of Indians was up there. They were hidden among the trees. Others lay behind piles of stone. All of them were armed. And all of them wore their war paint.”

“And another band was down here?” Billy asked quickly.

“Yes,” answered the Pioneer. “We are going up this slope. We are going up like the Indians did.”

“And you said it was ever so long ago?” asked Jane.

“Before the white men came?” questioned Billy.

“Yes,” said the man. “It was before the white men came. Only the Indians were in this country then.”

“How can you be so certain?” Billy asked. “No one could tell you about it.”

“By the things I have found on this field,” the man replied. “I always find long flint arrowheads. And I also find flint spearheads and stone battle-axes. All of those tell me it was before the white men came.”

“But,” asked Jane. “Please tell me how all those things tell you. I don’t understand. You see, we don’t know about this kind of exploring.”

“I understand why you are puzzled,” the man continued. And a pleasant smile came about his blue eyes. “Stone axes and arrowheads of flint were made by the Indians. They never had steel tomahawks and arrowheads until the white men came. I have never seen a piece of steel on this

field. So I know they fought before the white men came."

"Now I understand," Billy said very quietly.

"It's easy, of course, when you know things," Jane announced. Then they walked slowly up the slope. And Jane asked, "Are we where the Indians fought? I mean where they fought the big battle?" ✓

"No, they started from here," the Pioneer said. "But the fighting was up close to those trees. Arrows and spears don't fly very far. When we are closer to the trees we will look for arrowheads. And we might find a stone ax."

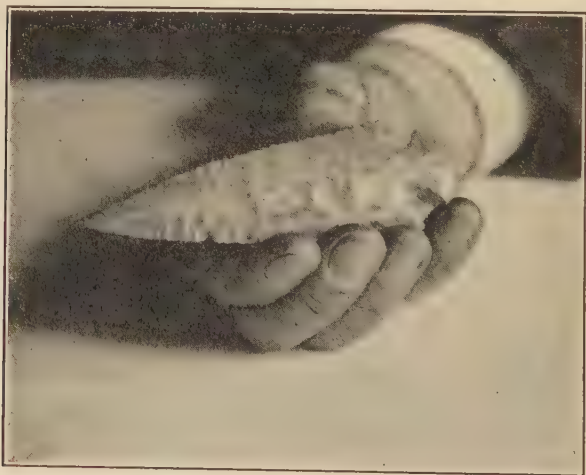
The mud was deep and heavy. It made the walking slow. But at length they came close to the trees. And the man said, "Now we're close enough for arrows to reach us. So you can keep your eyes wide open. Jane said she wanted to find something."

All of the children kept their eyes on the ground. They walked for some time. But no one found anything. Suddenly Thomas exclaimed, "I see one! There it is just in front of us. It's a fine big spearhead, too."

"Please don't pick it up, Thomas," Jane asked. "Would you mind my picking it up? I

never did find an Indian spearhead and I'd like to find it."

"No, indeed," Thomas answered. "I've found a few of them. I've been over here with the Pioneer before. Go ahead, Jane, and pick it up yourself."



He turned it over.

The girl picked up the flint spearhead. She handed it to the Pioneer. He turned it over, and the children looked at it carefully. Then Jane said, "Isn't it wonderful? It's been buried in the ground. And it's been there for ever and ever so long. I was the first person to touch it

since an Indian threw it." As she looked up she said, "My, but this new exploring is interesting. And it's different from our other exploring."

Again they walked through the heavy mud. They picked up a few broken arrowheads. Billy hit his toe against something in the mud. He picked up a smooth stone. While rubbing the mud off, his eyes grew big with excitement. "I've got something," he exclaimed. "Come and take a look at it, will you? What is it, anyhow?"

The Pioneer took the piece of stone. As he rubbed it clean, he said, "It's a battle-ax. I have found a good many of them. Feel how heavy and hard this one is. It would crack a very hard Indian head, wouldn't it?"

He ran his finger around a groove in the stone. He handed it to Billy. At the same time he asked, "What do you think that groove is for?"

For a moment Billy looked puzzled. Then he smiled quietly and said, "It must be for the handle. But our axes have holes for handles, haven't they? How did Indians fix a handle for it?"

"You're exactly right," the man replied. "The Indians never learned to make holes for ax

handles. They cut these smooth grooves. Then a green twig could be bent about the stone ax. With the ends wrapped together it made a good handle."



Ran his finger around a groove in the stone.

"Could you make a handle for it?" Thomas asked the man. "Do you know how Indians made them?"

"Certainly I could," replied the man. "When

we get among those trees, I'll cut a green twig. Then I can show you."

Later the Pioneer cut a small twig. He split it in two with his sharp knife. Then he peeled off the heavy bark. Quickly he twisted half of the twig about the stone. He pulled the ends together. And he bound them tight with some heavy twine. He handed the battle-ax to Billy.

"My!" exclaimed Billy. "You did that as well as if you were an Indian. The twig makes a light handle. But it is a strong one. Did the Indians use string?"

"No," answered the Pioneer. "They used the tough bark off some tree."

The children and the man walked among the trees. Just beyond the trees they came to the edge of a cliff. They could look straight down one hundred feet. And the creek flowed under the cliff.

The man pointed to a small valley. And he said, "That's where the Indians camped. I mean when they were hunting and fishing."

"It's a beautiful place to camp," Thomas said. "I've camped there with father."

"The Indian children sometimes came here with their parents. That was when the red men

were not on the warpath," the man explained. "Suppose we sit on this log. Then I'll try to tell you what those youngsters did—how they



"The twig makes a light handle."

played and learned to hunt and fish. I'm going to try to make you see them."

"I didn't have any idea you told stories,"

Jane exclaimed. "It seems queer. But, do you know, explorers all tell good stories. Do you suppose Billy and I could learn to tell stories?"

"Yes, I do," the man replied. "It's easy to tell stories when you can see things."

"But," Billy interrupted. "You can't see any Indians. There aren't any Indians any more. There haven't been any for a long time."

The Pioneer smiled about his blue eyes. Then the smile slipped to the corners of his mouth. Again he said, "I can see the young Indians. I can see them playing and having a good time. But I am seeing them with my mind's eye."

"You see that strip of grass?" he continued. "Well, on it are four tall wigwams. Just next the creek the camp fire burns brightly. Two small Indian boys and two dark little girls are seated by the fire."

"One of the boys jumps to his feet. He grasps a small bow in one hand. Down to the water's edge he creeps quietly. Shading his eyes with his brown hand, he looks into the water. As he steps into the water, he fits a tiny arrow in his bow. Gradually he wades out into the stream. When the water rushes about his knees he stops. Gradually he appears to turn to stone. Not a

muscle moves. All the while he watches the water.

“Five minutes pass. The children on the bank do not move. The little bronze figure in the stream is motionless. Then very quietly the bow is bent. Suddenly there is the quick twang of the bowstring. The arrow buries itself in the water. There is a quick swirl of water. The bronze figure falls forward into the stream. It comes up with a big bass struggling on the arrow.

“It doesn’t take long to clean the fish. And the Indian girls place it on a hot stone to cook. The boy who shot the fish turns to the girls and says something. At once the two small figures run into the willows. They follow a narrow path through the trees. Now and again they cross a small brook. When the narrow valley widens, they stop. A swamp of an acre or two lies before them. They push their way through tall, broad, round leaves. Tall pond lilies are in bloom. Some blossoms are dead and big seed pods nod on tall stems.

“The small dark girls break off the seed pods. With arms full of the ripe pods, they come back. Seating themselves near the fire, they take out the round seeds. They scrape the hot coals

aside. Then they place the seed among the coals. They push a few coals about the seeds to make them roast. Now and again they stir them."

"That's exactly the way we do chestnuts," Thomas suggested.

"Exactly," the Pioneer replied. "And those seeds were a good deal like chestnuts. I've heard them called water chinquapins (chink-a-pins). Chinquapin is the name of a small chestnut."

"Could we come here and camp next summer?" asked Billy. "It would be wonderful. We'd catch the fish. We couldn't shoot them with a bow and arrow. But we'd get some fish. And is the swamp still up the valley? And do the pond lilies grow there? Fried fish and roasted lily seeds sound good."

"Yes," answered the man. "I'm certain your Cousin Fanny would be willing. And Thomas is always ready to camp out. Aren't you, Thomas?"

"You know I am," answered Thomas. He glanced at his watch. Then he jumped to his feet and exclaimed, "Let's hurry! We haven't a moment to lose or we'll be late for dinner."

CHAPTER VII

ANOTHER STORY IS TOLD

Dinner was almost over. Billy had finished his big piece of pie. Jane had eaten only half of hers. She was looking out of the window.

Suddenly Cousin Fanny laughed and Jane gave a start. Then Cousin Fanny said, "What were you thinking about, Jane? Your thoughts must have been ever so far away. You jumped as if you were shot."

"No," Jane answered. "My thoughts were very close. I was wondering about the birds singing. Last summer all the birds were singing. Now none of them are singing. Why don't they sing? What's the matter?"

"Because they haven't any homes," Cousin Fanny replied. "And also because they haven't any babies. Birds sing about their homes. But birds have homes only in summer."

For a moment the children were silent. Then Billy suggested, "That's a whole lot like people, isn't it? Women sing about their homes. And

they sing to their babies, too. Don't they?"

Jane was again looking out of the window. This time Thomas exclaimed, "What is it?"

Jane gave another big start. And then she said, "I was wondering about something. I was wondering about people who can tell stories."

"You mean like the Pioneer can?" Billy asked.

"Yes," the girl replied. "And like the old Colonel, the Captain, Cousin Fanny, and Thomas. They all tell good true stories. I wonder why?"

"The Pioneer explained how he told stories," Thomas said.

"Yes, he did. And then again he didn't," Billy replied. "He said he saw the Indians with his mind's eye. Isn't that what he said?"

Cousin Fanny laughed. The children all smiled. They always smiled when Cousin Fanny laughed. Then she asked, "Did the Pioneer say he saw the Indians with his mind's eye?"

"Yes," Jane replied. "That's exactly what he said. But I don't understand what he meant."

"Do you remember my story of the ice straws?" Cousin Fanny asked.

"Of course, we do," Billy answered at once. "It was a splendid story."

"And do you remember you enjoyed it?" she continued.

"Yes," answered Jane. "We enjoyed it so much."

"Could you tell me why you enjoyed it?" Cousin Fanny asked.

"Because it was a good story," Billy answered.

"What do you mean by a good story?" Cousin Fanny asked.

"It's one we enjoy," Jane began. Then she smiled and continued, "That's exactly what I said a moment ago."

All of the children looked at each other. They smiled rather foolishly. Then Thomas suggested, "Tell them, Miss Fanny. Tell them about educational motion pictures. The motion pictures we all have in our minds. Then they'll understand."

"Do you mean—" began Billy.

"Give Cousin Fanny a chance," Jane interrupted. "Let her explain."

"Jane, have you told any one about last summer? I mean about your exploring? Have you, Billy?" Cousin Fanny asked.

"Yes, of course, I have!" Jane exclaimed. "And the people enjoyed it, didn't they?"

"Yes, I believe they did," Billy replied. "I know I talked ever so much about it."

"Why did they enjoy it?" Cousin Fanny questioned.

"I don't know," Billy announced. "I never thought about it."

"Well, I'm going to tell you," Cousin Fanny said. She rested her elbows on the table. She put her chin in her hands. She looked first at Billy and then at Jane. At length she said, "The people enjoyed what you told them because you had a good motion-picture film."

"A good film!" Jane exclaimed. "I never saw a motion-picture film made. I never saw one taken. And I haven't any in my head. At least I didn't know I had."

"But you've made hundreds of them. And you have used them time and again," her Cousin Fanny remarked. "Listen to me. The Pioneer said he saw with his mind's eye. What he meant was he had a good motion-picture film. Of course, he doesn't know it any more than you do." Cousin Fanny stopped talking for a moment. Then she continued:

"I know what I'll do. I'll show you three children just exactly what I mean. I'm going to get my album. We'll sit right here. I'll run an educational motion picture in my head, and tell you the story."

Billy and Jane started to ask questions. But Cousin Fanny said, "No questions now. Wait until I get through." She soon had her album in her lap. Then she said:

"I've selected a film to run. I am going to put it on the motion-picture machine in my head. Then I'll snap on my light. I'll start my machine. And I'll focus the picture on the screen in my head. By the way, we all have a common name for that screen. Do you know it's name?"

No one answered. So Cousin Fanny said, "We call it the screen of memory."

"Why, I—" began Billy.

But Cousin Fanny said, "Wait until I get through. Now I can see the picture on the screen. So I'm all ready for the story.

"One summer day Thomas came over to see me. It was three years ago. But he was busy exploring things and he was quite small. We had seen all the birds' nests about the yard. So we were down in the big pasture.

"The mother of a young calf was afraid we might hurt her calf. So she trotted toward us, tossing her head. Thomas at once said, 'Don't be afraid, Miss Fanny. I'll run her away.' And he stepped forward and picked up a stone. At least he thought it was a smooth stone.

“The stone made a queer, hissing noise. And Thomas stopped with his hand in the air. ‘Did you hear that?’ he asked. ‘I never heard a stone make a noise. And this stone is very light.’

“The cow had gone back to her calf. Thomas sat down on the grass to look at the stone. As he turned it over he asked, ‘Is it a turtle or what?’ ”

Billy and Jane looked puzzled. Cousin Fanny smiled. And then she asked, “You are having trouble with your films, aren’t you?”

“We don’t know,” Jane replied. “We could follow the story until the stone made a noise. But now we’re all mixed up.”

“Exactly,” Cousin Fanny continued. “I ran my film and told the story. You made your films and saw the story. Didn’t you? It was easy to do until the stone made a noise. Then your pictures weren’t clear. Now here’s a picture of Thomas in my album. He is holding in his hand a little box terrapin. It lives in the woods. And when it’s in danger it pulls its head and legs in. Then it closes its shell. As it lies shut up it looks like a stone. It has a protective coloring. It has a protective shape. You can see it looked like a stone. And the air being pushed out was what Thomas heard.”

"This is interesting," Billy said. "Now we can see the terrapin. That makes our film all right. You can go on with the story again."

"Well," continued Cousin Fanny, "Thomas



"Is it a turtle or what?"

was very anxious to have a good look at the terrapin. He placed it in the grass. Then he moved off and sat down. At the end of fifteen minutes its head came out. It came out slowly and cautiously. One bright eye watched us. We didn't

move a muscle. Then one leg after another came out. And it hurried toward the wood.

"Here are some more pictures. They'll help you with your film. One shows its head out. The other shows it hurrying to the wood. As I told you, it is easy to tell stories. All you have to do



"Its head came out."

it to have good clear films. That's the way people write books. That's what makes some people so interesting."

Billy sat and looked at his Cousin Fanny. A small frown came just above his eyes. At length he said, "You called your screen the screen of

memory. I didn't know my memory was a screen. When I study a spelling lesson, I remember the words. That's my memory. But it isn't any screen. And I don't have any pictures."

"Billy, you're mistaken," Cousin Fanny an-



"It hurried toward the wood."

swered. "Don't you remember when you were asked to spell a word? And you couldn't remember it. Didn't you close your eyes or look up at the ceiling? And weren't you trying to remember how the word looked? And just where it was on the page you had studied?"

"That's exactly what I did do," Billy replied. "Then I suppose I'm always taking pictures or

films. That's queer. I never thought about it that way."

"Yes," Cousin Fanny replied. "Our eyes are fine cameras. We are always taking pictures. You see a bird today. You take its picture. You know it tomorrow. You have its photograph in the album in your head. You see a robin build her nest. You make a movie film of it. Then you remember it. That's the way we remember things. Don't you see how wonderful it is? And yet it is quite simple."

"Then you have to have good films to tell good stories," Jane suggested.

"Yes," Cousin Fanny said. "The Pioneer has splendid films of Indian relics. The Colonel, the Captain, Thomas, and I have films of birds. If we didn't, you wouldn't care for our stories. That's why we can tell stories."

"I wish we could stay here forever," Jane exclaimed.

"So do I," announced Billy.

"It's too bad. Our holidays are almost gone. Then it's back to school," Jane continued.

"Why not do some exploring then?" asked Cousin Fanny.

"But you can't explore at school. At school

we use books," replied Billy. "Exploring is out of doors."

"Why not try using your films?" asked Cousin Fanny.

"You mean the ones we've taken out here? And the ones we got in the park?" asked Jane. "But how could we use them at school?"

"Of course, that's what I mean," answered Cousin Fanny. "Use your films if you have to tell a story. Use them when you have to write a story."

"Then we'd be using our exploring?" suggested Billy. "Using it at school."

"Yes," continued Jane. "And we'd get more films next summer. They'll be splendid ones. Because they'll be of the camp we're going to have."

That afternoon they left Bluebird Valley for home. All the way in, the children talked about telling stories. And they planned for the camp in the summer.

Two days later Billy went home. As he left, he said, "Jane, it's been wonderful. But next summer is going to be more wonderful. Tell the Captain good-by for me, won't you?"

CHAPTER VIII

A TINY NEST IS FOUND

Summer vacation time had come again. Jane stood on the front porch. The summer sun peeped through the vines about the porch. Suddenly an automobile horn screamed. The big machine drew up to the porch. In a moment Billy jumped out. He carried a suitcase in each hand. He also carried a very broad grin on his face. He ran up the steps two at a time.

“Here I am again, Jane,” he announced. “It’s fine to know it’s vacation time. I’m ready for some more exploring. I’m ready to go camping and exploring. What plans have you made? How soon can we start?”

“My, but you ask many questions,” Jane replied. “And you ask them ever so fast, too. I’m not going to answer them now. Come on, we’ll run into the park. Then we’ll talk about everything. And we’ll make some plans.”

They ran down a long green hillslope. The soft summer wind made waves in the grass.

Above them the white clouds chased each other. The sky was deep clear blue. Each tree in the park was dressed in green. And birds were singing everywhere.

"Listen," Billy said. "The birds have homes this summer. They're singing to their babies. Remember what Cousin Fanny told us last winter?"

"Of course, I remember," Jane replied. "Let's go down the hill this way. I want you to see the boys and girls wading. We'll just have time before we eat lunch."

They walked down a little hollow. Tall trees shaded the path in the hollow. The children soon came to a small stream. Many happy boys and girls waded in the sparkling water. Small boys turned over stones hunting for crayfish. And a meadow lark sounded his whistle somewhere in the grass.

Suddenly Billy sat down under a big tree. He threw back his head and laughed. Then he asked, "What are we going to do, Jane? My, but it's splendid to be back here again."

"Would you like to see the birds in the park? I mean the ones the Captain feeds?"

"Yes," Billy answered at once. "But—"

"Don't say another word," Jane interrupted

him. "I know exactly what you want to do. I know what you're thinking. You're as wild to go camping as I am. You want to hurry out to Bluebird Valley. You want to go this afternoon. You want to go because the sky is blue. You want to go because the weather is fine, and you want to see Cousin Fanny, Thomas, and the Pioneer. Am I right?"

Billy jumped to his feet. He gave a loud Indian war whoop. And then he said, "You're right, Jane. Yes, let's go this afternoon. And the sooner we go the better."

Billy and Jane raced through the tall grass. The grass almost touched their knees. Once or twice they fell down. And as they ran, they laughed and talked.

Just ahead of them a small bird flew up out of the grass. Its short wings did not seem very steady. It dropped into the grass not far from the children.

"What was it, Billy?" Jane asked.

"I don't know," answered the boy. "It just looked little and brown to me. Suppose we try to find it in the grass."

They looked through the grass for several minutes. At length they found the tiny bird. It was

crouching in the grass. And it breathed rapidly with its bill wide open.

"I didn't see the bird at first," Billy said. "When it moved I saw it. If it had kept quiet,



"It looks almost like the ground."

we never would have seen it. It looks almost like the ground."

"It's a baby meadow lark," Jane said. "Its back has protective coloring again. We found

frogs and birds last summer colored so you couldn't find them. Don't you remember, Billy?"

"Come on, Jane!" Billy exclaimed. "Leave the little bird alone. We must hurry. We want to go to Bluebird Valley today. We can come back to the birds in the park."

After lunch Jane got out a small tent. She also had two folding cots. Billy opened one of his suitcases. And he took out a little sharp ax.

"This is fine," said Billy. "I've got this ax for camp. You and Cousin Fanny can use the cots. Thomas and I will sleep on the ground. I'll cut some boughs with my ax. And we'll make a bed of them."

By three o'clock they were at Bluebird Valley. Cousin Fanny and Thomas met them at the station. Billy and Jane were ready to ask a dozen questions. But Cousin Fanny said, "Thomas has just come back from Red Bridge. He had a chat with the Pioneer. He is very busy on the farm. He can't camp with us. But we four will start for our camp early tomorrow. And we may stay two or three days. That is, if you like camping."

Billy and Thomas unpacked the tent and cots. They put them on a side porch. They got Cousin Fanny's cooking outfit. All of this was piled ready for the start early the next morning.

Then Thomas said, "Billy, go and get Jane. Your Cousin Fanny and I found a nest not long ago. It's the prettiest one I ever saw. We've been watching it for some time. You can see it best from the barn loft."

The two boys and Jane ran down to the barn lot. They climbed the ladder into the loft. It was dark in the loft. The air was heavy with the smell of fresh clover hay. The sun made bars of light through holes in the walls. And in the bars of light bits of dust danced up and down.

"Is it a barn swallow's nest?" Billy asked.

"No," Thomas answered. "I didn't tell you the nest was in the barn. I said we could see it from the loft."

Thomas opened the loft window. The three children looked out. Just below them was a small apple tree. Thomas pointed into the tree. Then he asked, "Do you see the nest in that tree?"

Billy and Jane looked at each of the big limbs. Then they looked over each small limb carefully. But they could find no nest. At length Thomas laughed and said, "I'll help you. The nest is on one of the smaller limbs. And it is hard to see. It is a nest that has a protective color. That's why you can't see it."

Again the children looked carefully. They

both shook their heads. And Billy said, "We give it up, Thomas. Point at the nest."

Thomas pointed to a small limb. It was quite close to where they sat. But Billy and Jane were still puzzled. Jane looked at Thomas and said, "There's a knot on the limb. It's exactly where you point. But there's no nest that I can see."

Thomas laughed long and loud. "My," he said, "didn't I say 'protective coloring'? That knot is the nest. If you look at it, you'll see it's a nest. Notice the hole in the top."

"Yes," Billy replied. "I see the hole in the top. But it looks ever so much like a knot to me."

"What bird built such a tiny nest?" Jane asked. "It looks like a humming bird's nest. I never saw a humming bird's nest. But I've seen pictures of them."

"It does look like a humming bird's nest," Thomas answered. "But it isn't. It's the nest of a blue-gray gnat catcher. The bird is very small. It's just a little larger than a humming bird."

Thomas took a pair of opera glasses out of his pocket. He handed them to Jane. And he said, "Take these glasses. Look at the nest with them."

Then you can see how beautifully it is made. And how exactly it matches the limb it is on."

Jane had the glasses close against her eyes. She did not take them down. But she said,



"That knot is the nest."

"Thomas, it doesn't look like a nest. These glasses bring it up close to me. I can see the little hole in the top. But I can't see any eggs or young birds."

"Let me see," Thomas said. "There were babies in the nest a week ago. Let's go down

under the tree. We might see one of the babies.”

“Wait a minute!” Billy exclaimed. “Let me look at the nest through the glasses.”

Thomas handed the glasses to Billy. While Billy looked, he said, “It’s beautiful. Say, Thomas, the inside looks like it was made of cotton. What is it made of?”

“Your Cousin Fanny says it’s down from the willows,” Thomas answered. “The willows have catkins instead of flowers. And the catkins have fine down on them. It looks a good deal like cotton. Your Cousin Fanny says the birds use it. And the nest is covered with green lichens, the sort that grow on apple trees.” ↓

Billy gave the glasses back to Thomas. And he said, “You’re right, Thomas. This nest is an example of protective coloration.”

“It is more than that,” Jane announced. “It is protective coloring and protective shape, too. It’s the color of a knot and it’s the shape of a knot.”

The children sat down under the apple trees. They saw no bird for some time. At length a faint thin call came to their ears. A second time they heard it. Within two minutes they saw a small bird. It was a baby bird and a hungry one.

Because every now and then it asked for food.
And it asked in a faint thin little voice.

“That’s one of the babies!” Thomas exclaimed. “See how stubby his tail is. Look how



“That’s one of the babies.”

short his wings are. And the corners of his mouth are still yellow.”

The sun had dropped behind the trees in the orchard. The cows came up the lane to be milked. The pigs begged for some corn for supper. So the children ran up to the side porch.

Jane looked at the tent and the camping out-

fit. She smiled and said, “My, it’s too good to be true. We’ll be camping tomorrow. We’ll be eating food the Indians ate. And we’ll cook our food over a real camp fire. Won’t it be splendid?”

Then they went into the big house.

CHAPTER IX

THE CAMP IS MADE

Billy and Jane were downstairs early the next morning. The fresh dew sparkled on the grass. A mocking bird sang in a tree top. And the sun was above the hilltops.

“My!” exclaimed Billy. “Isn’t it a beautiful day?”

“Yes,” answered Jane. “And it’s exactly right for going camping. Let’s take a look at our camping outfit.”

They ran around to the side porch. They found the same pile of tents and cots. But there was another pile. In the pile were a number of bundles. And there was a second small tent.

Billy picked up one of the bundles. Then he said, “I thought we were up before any one. But Cousin Fanny has been up ahead of us. This is a box of sliced bacon.” He picked up a second bundle. And he continued, “Here’s another full of fresh eggs.” He kicked a big canvas bundle. Then he said, “Here’s a second small tent. Jane,

I thought we'd camp like Indians. I thought we'd eat fish. And we'd roast lily seeds like chestnuts. And we're carrying a whole lot of food with us."

Some one laughed behind the children. They turned and saw Cousin Fanny. She was standing in a door. Again she laughed and said, "Never mind. Billy, you don't have to eat bacon and eggs. You can eat like Indians. But I want to have food with us. I've done a great deal of camping. Indian food is all right for a while."

Half an hour later they ate breakfast. Billy and Jane were excited. But they had been awake a long time. And they were as hungry as could be. So they were at the table for some time.

"Honk, honk, honk!" screamed a big automobile.

Then Thomas's shrill whistle followed. Both of the children ran on to the side porch. Thomas was looking over the bundles. And a tall boy sat behind the wheel of the automobile.

"This is my brother, Jack," Thomas said. "And Jack, here are Billy and Jane. You'll remember I wrote you about them. It was when you were away at school."

The big boy smiled. And Billy and Jane

smiled back at him. Then Jane asked, "Jack, are you going to camp with us?"

"Yes, indeed," replied the big boy. "I like camping immensely. But we'd better pack things now. We can talk in camp and on the way over."

The three boys were soon very busy. They fastened the tents on the running boards. Jane and Cousin Fanny got into the automobile. The boys handed them the bundles of food, because food must be packed carefully. In a short time the automobile was loaded.

In fifteen minutes everything was ready. Jack got behind the wheel. And the automobile was soon out on the road. Down the road it glided smoothly and swiftly. It rumbled over Red Bridge. Then it climbed slowly up the long hill.

The Pioneer was at work in a field. He saw the children and waved his hat at them. Soon the automobile ran along the high ridge. Then it dropped into the little valley below the battlefield. There was no road to the camp, so the boys had to carry the outfit.

In twenty minutes the boys were very warm. But everything was at the camping place. For two hours the boys were as busy as beavers. They put up the two small tents. Both of the cots were in one tent. And in the other was a

deep bed of green boughs. A merry little camp fire danced between the tents. And by the fire was a pile of dry wood.

"I've had a lot of fun," Billy said. "But I'm hot as can be. And I'm hungry as a bear. When do we get something to eat?"

Cousin Fanny smiled. Then she said, "Indians eat when they have food. They often go without anything to eat."

Billy smiled a very weak smile. And he asked, "How long would it take to cook a fish? I mean Indian fashion, Cousin Fanny. And what about roasting lily seeds?"

"A good long time," Cousin Fanny answered. "But you and Thomas haven't any fish. And you haven't any lily seeds. We'll wait until you catch some fish. And then you can get the lily seeds. By that time the camp fire will be just right."

Billy's smile grew weaker still. Then he suggested, "Suppose we put off being Indians. Let's have dinner and then play Indian. I don't believe I can wait much longer for something to eat."

"Then is it to be bacon and eggs?" Cousin Fanny asked. "And some bread and butter?"

"Yes!" exclaimed Billy. "Anything, so we

can have it in a hurry. I'm almost starved."

Jane rolled up her sleeves. She fried bacon and eggs in a frying pan over the fire. Cousin Fanny cut many thick slices of bread. And she buttered each slice. In a short time dinner was ready. Every one ate out of tin plates. There were no glasses. So they drank Indian fashion from a clear little spring.

Thomas finished his third egg. Then he said, "I'm through. Come on, Billy. We'd better catch some fish. With fish and lily seeds, you can play Indian."

Jane and Cousin Fanny washed the cooking outfit. The boys got out their fishing tackle. Suddenly Billy said, "I knew I'd forget something. We haven't got any bait. Where can we get some, Thomas?"

Thomas did not answer Billy. He unrolled a small tin can. Then he said, "Take a look in it. I brought plenty of worms with us. We can play Indians, Billy. But we aren't Indians at all. I brought this bait. And Cousin Fanny brought bacon, eggs, bread, and butter. Come on, let's get some fish for supper."

Billy and Thomas walked up the creek to fish. Cousin Fanny and Jane took a nap in their tent. And Jack pushed his way into the willows.

A small stream wound in and out among the willows. Silvery minnows played in the clear water. A narrow path followed the side of the stream. Jack followed the path. At length he



Big lily leaves nodded in the wind.

came to the swamp. Big lily leaves nodded in the wind. Among the leaves were heavy seed pods. And huge yellow flowers nodded, too. ♀

Half an hour later Billy and Thomas were

back at camp. They had a long string of sun-fish. They cleaned them and put them below the spring to keep cool. Cousin Fanny and Jane had finished their nap. And Jack came through the willows.



Huge pale yellow flowers nodded, too.

“Where have you been, Jack?” asked Jane.

“Have you been to the swamp?” questioned Billy. “The swamp the Pioneer told us about?”

“Are there any lily seeds?” continued Jane.

“We want some. The Pioneer said the Indians ate them.”

Jack laughed. Then he asked, “Any more questions? Yes, I’ve been to the swamp. There are lots of lily seeds. And some of them are ripe. Do you want to go and get some?”

“Yes,” Billy and Jane answered at once. “We want a big lot of them to roast for supper.”

Thomas put some extra wood on the fire. Then the whole party pushed into the willows. They followed Jack along the path. They reached the swamp and waded into the water. In a few moments they had many big seed pods.

“Some pods are very ripe,” Thomas said. “Here’s one, and the seed rattled in it. Most of the pods are still green. And the big seeds are tight in the green ones.”

“Let’s take them back to camp,” Billy suggested. “Then we can roast some of them. You can eat chestnuts raw. Maybe you can eat these raw.”

Back at the camp they put the pods in piles. The green ones were in one pile, and the ripe ones in another pile. In a short time the children had a handful of ripe seeds. They put these in the hot coals to roast.

Jack sat with his back against a big tree. In

his hand he held a green pod. And with his knife he was cutting into it.

"What are you doing, Jack?" asked Jane.
"We have all we need roasting in the hot coals."



"The big seeds are tight in the green pods."

"Just exploring a little bit," Jack replied. "I want to find what's in a seed."

"Can we watch you?" Billy asked.

Jack nodded his head. Billy, Jane, and Thomas sat at Jack's feet. Jack smiled as he

looked at them. He cut a big pod in two and took out some seeds. He gave each child a smooth, green seed. Then he said, "Open the seed and taste it." ✓

"My," announced Thomas, "it does taste like a chestnut."

"Yes, it does," said Billy and Jane. "The seeds ought to be good roasted."

"Did you see anything in the seed?" Jack asked.

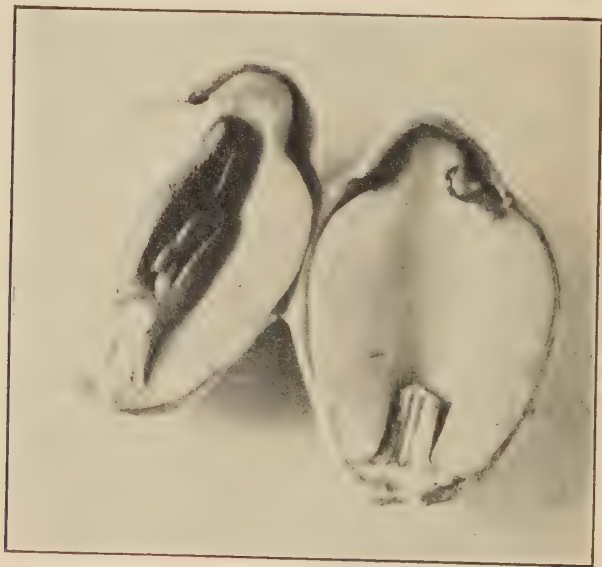
"No. We were tasting them," Billy said. "We weren't looking for anything."

For two minutes no one said a word. Each held a big seed. And they were busy taking the seeds to pieces. At length Billy's seed opened into two pieces. And he said, "This opens right in the middle. And it's white like a chestnut." A moment later he asked, "Jack, what's this? Look, right in the middle. Don't you see there's something small and green?"

Quietly Jack reached into his pocket. He handed Billy a magnifying glass. "Take this," he said. "Look at the green thing. And do some exploring. I'm anxious to know what the green thing is."

Billy's face wrinkled into a frown. Three

times he looked through the glass.' He shook his head. Then he handed the glass to Jane. She looked at the small green thing. Then she said, "Cousin Fanny, please give me a pin. The



"The little green thing needs straightening out."

little green thing needs straightening out. It's all crumpled up."

Jane placed the little green thing on a piece of paper. She straightened it out with the pin. Then she looked at it under the magnifying

glass. She shook her head. She straightened the green thing again. All at once she laughed. Then she said, "I know, I know. Here, look, Billy."

Billy used the glass for some time. At length



"It's a baby water lily."

he said, "It's green. It's in a seed. Last winter Cousin Fanny said seeds had baby plants in them. It must be a plant baby. Am I right, Jack?"

"Yes, that's what it is," answered Jack. "It's a baby water lily. And—"

But the seeds in the fire began to pop. So the children had to watch them. And Jack said, "Billy has to play Indian now. He has to eat Indian food. So I'll help you explore tomorrow. We'll get more pods. And we'll learn more about plant babies."

Billy and Thomas got their fish. In a short time the fish were getting brown in a frying pan. Several handfuls of lily seeds popped in the coals. The children ate Indian food for supper. And they said it was good. But they also ate many slices of bread and butter.

Slowly the red sun slipped behind the hills. The pale new moon hung above the tree tops. One by one big stars winked in the dark sky. And the camp fire died down.

Everybody got sleepy quite early. Jane and Cousin Fanny used the cots. The boys rolled up in blankets and slept on a bed of boughs.

CHAPTER X

SEEDS USE BOATS

Something roused Billy the next morning. He sat up on his bed of boughs. He unrolled the blanket in which he had slept. With both fists he rubbed his sleepy eyes. Opening the tent flaps he looked out.

The sun, a big red ball, was above the trees. The air blew fresh and cool. From the willows came the song of a thrush. Even the creek was singing over some rocks.

“Wake up! Wake up! Wake up, everybody! The sun’s up! It’s time you got up, too!” Billy yelled.

He pulled the boys out of their blankets. He yelled at Cousin Fanny and Jane. In ten minutes everybody was up. Then they washed their faces in the creek.

Jack had the fire blazing briskly in a short time. He piled it high with dry wood. In a short time the fire died down. It settled into a bed of red coals. And breakfast was put on to cook.

Again they had bacon and eggs. But the eggs were scrambled this time and the bread was toasted on green twigs over the dull coals.

Breakfast done, Jane asked, "Can't we go to the swamp again? I want to get some lily pods. I am anxious to know about plant babies."

"All right," Jack answered. "I'm ready if everybody else is."

Again they pushed through the willows. They followed the path by the small stream. As they walked, Billy said, "Indians used this old path a long time ago."

"How do you know?" questioned Cousin Fanny.

"The Pioneer said they did," Billy announced. "He said they came this way to the swamp. They came to get lily seeds to roast."

"I suppose they did then," Cousin Fanny said. "The Pioneer ought to know. He has explored this country for forty years."

At the swamp they gathered green lily pods. Thomas was knee deep in the water. He reached up for a dry pod. But it broke from its stem. It did not sink, but floated on the water.

Thomas watched it for a moment. Then he exclaimed, "Come here! Come here! I've made a discovery. Look at that dry lily pod. It fell

into the water, but it didn't sink. It floated. Look at it!"

Every one looked at the floating pod. Jack



"The lily has built a boat for its babies."

pushed it about. At last, he said, "Plants take good care of their babies. The lily has built a boat for its babies. Look at that boat. Each seed and the baby in it has a separate state-room. And they can float anywhere."

Everybody laughed at what Jack said. But Jack was too busy to laugh. He had a big green pod in his hand. And he was wading toward the edge of the water.

"Come with me," he called. "I want to let you see something. You said you wanted to explore things. Open these pods and you'll find out why they float."

Each child went to work. Billy split a pod in two with his knife. One or two plump seeds fell out. But he was busy examining the pod. Cousin Fanny and Jack sat and watched Billy. He split a second and then a third pod. At length he said, "I believe I know. But I'm not very certain. They look like water wings to me."

"Water wings, Billy!" exclaimed Jane. "What do you mean? The water lily doesn't blow them up."

"I mean," Billy began. Then he hesitated and continued slowly, "They're not water wings. But the pods are full of air. Look, Jane, can't you see? It's the air that makes the pods float. There is ever so much air in this pod."

"You're right, Billy," Jack replied. "The pod is a boat. A boat that floats well and right side up. All because it has ever so many air



"It has ever so many air compartments."

compartments. And because it's built like a boat. It's broad on top and has a keel."

"But what's the use of the boat?" Thomas asked.

"Can't you guess?" Cousin Fanny questioned. "Why do some seeds have hooks? And some fly with the wind?"

"That's so they'll be scattered. We learned about that at school," Thomas replied. Thomas began to smile and continued, "These seeds don't have any hooks. They can't sail. And they're big and round and heavy. That means they'd sink. So the lily builds a boat. And they all float away and get scattered. It's fun to explore. And it's more fun when you have somebody to help you."

"That's exactly right," Jack announced. "Are you ready to go back to camp?"

"No, not yet," Jane answered quickly. "I must have a good look at a baby plant. Last night it was very late. So I didn't see the baby plant very well. Let's all sit down in a row. Each of us is to get a baby plant out of a seed. Jack will lend us his magnifying glass."

The whole party sat in a row. Each was busy with a fat seed. It seemed easy to get the baby

plant out of a seed. But the plants were tender and broke easily.

At length they had two perfect ones. Jane again borrowed a pin from Cousin Fanny. With it she straightened out the baby. Billy watched Jane at work. Suddenly he asked, "Can I have your magnifying glass, Jack? I want to see something."

Billy put the baby plant on a piece of paper. He placed the magnifying glass over it. His face became wrinkled. He pushed the plant about. Then he asked, "Is that crooked piece the stem? And what's that on top of the stem?"

"Are you asking me?" Jack said.

"Of course, I am," Billy replied.

"I'm going to show you something," Jack answered. "And you children can answer your own questions."

Jack walked to the edge of the swamp. He pulled a green stem out of the water. The children crowded about him. He let each child look at it. Still they were puzzled.

Jack smiled quietly. He pulled another green stem. And he held it next to the first he had pulled. At length he asked, "What are these?"

"You've got two stems. And there's a leaf on the end of each of them."

“Yes, that’s what they are,” Jane said. “But they are different. On one the leaf is curled up tight. And on the other it is unrolling.”

“And here’s another,” Thomas exclaimed. “And it’s unrolled a little bit more.”

Jack took all of the stems. He placed the three stems on the ground. Again he put the baby plant in Billy’s hand. Then he asked, “Now look at the baby plant. Can you answer your question, Billy?”

“Yes, I’ll answer my own question,” Billy announced. “The crooked piece is a baby stem. And there’s a little rolled-up baby leaf on its top.”

“Exactly right again,” Jack replied.

“But,” Jane asked, “why are the leaves rolled up?”

“I could tell you why,” Jack answered. “But you three are exploring. I’ve let you answer most of your questions. Can you answer this one, too?”

“I believe we can,” Thomas said at once. “All of us like to explore. Even if it is just plants and their babies.”

Cousin Fanny had been quiet for some time. Now she said, “Jack, I’m going to help them a

little. I'm not going to tell them anything. I'm just going to ask them one or two questions.

"Where do the lily seeds sprout?" Cousin Fanny continued.

"In a swamp, of course," Jane answered. "They grow under water. You can see that right here."

"All right," answered Cousin Fanny. "Now tell me something more. Is it easy for a stem to push up through the heavy mud?"

"Of course, it isn't," Billy replied. "It must be hard work. And—" Billy stopped talking suddenly. He picked up the three stems on the ground. He looked at the first one. A broad smile broke over his face.

"Now I know," he announced. "Look, the curled leaf is straight up. The top of the curled-up leaf is sharp. The stem uses the leaf for a spear. And the spear cuts through the mud."

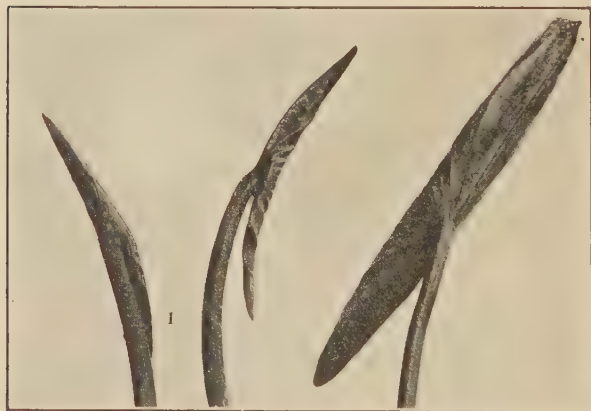
"Yes," said Jack. "Now look at the leaves in the swamp. The leaves come up like spear-heads. Then they unroll, slowly. As they unroll the stem grows tall. After a while they are wide open."

"And each baby plant is ready to push," said Cousin Fanny.

"That's fine!" exclaimed Thomas. "But I've

done enough exploring. Let's go back to the camp. We'll have time for a swim before dinner."

"We'll take some seeds with us," Jane an-



"The leaves come up like spearheads. Then they unroll slowly."

nounced. "I like roasted lily seeds. We'll have them for dinner."

In a short time they had enough seeds. They ran laughing through the willows. At the camp the boys rebuilt the fire. Soon it was blazing merrily. And the boys got into their bathing suits.

Jack found a stout grapevine. It grew high

among the branches of a big tree. And the branches hung over the creek. He cut the vine near the ground. Then it was like a rope tied in a tree top. On it he swung far out over the deep water. He dropped off and made a big splash. In a moment his head came up and he swam to the bank. Billy and Thomas soon learned to swing out and drop.

Cousin Fanny and Jane watched the boys. They laughed every time one made a big splash. Every one had a splendid time. Suddenly Jane said, "I smell something burning."

She ran back to the camp fire. All of the lily seeds were burned black. No one could eat them; so everybody ate bread. When dinner was over, Cousin Fanny said, "I didn't bring enough bread. We haven't a slice left. And we have very few eggs and bacon. Jack, you must go home and get more food."

CHAPTER XI

A DOVE FOOLS THEM

“How long will Jack be gone?” asked Billy.

“He’ll be gone two hours,” Thomas answered.

“He has to drive home. Then he’ll have to go to the grocery. After that he must drive back here.”

“I don’t want to go to the swamp,” Jane announced. “We’ve done a lot of exploring there. Can’t we explore something else?”

“Thomas, what can you suggest?” Cousin Fanny asked.

“There’s a big woods across the creek,” Thomas replied. “I’ve never been in it. We might explore it.”

“Come on!” exclaimed Billy. “Let’s go right now.”

They walked down to the creek bank. There was no bridge across the stream. But the water was shallow as it flowed among some rocks. Every one took off his shoes and stockings. Then they waded into the sparkling water. Jane

giggled as the swift water tickled her toes.

On the far side they sat on a rock. Jane tried to pull on her stockings. But her feet were too wet. At length she said, "What can I do? I can't get my stockings on. I wish I had a big soft towel."

"Put your feet out in the sun," Thomas said. "You're a poor Indian, Jane. Indians never had any towels. They had to dry their feet in the sunshine."

All of them put their feet in the sunlight. They laughed and talked and wiggled their toes. In ten minutes their feet were perfectly dry. Then they put on shoes and stockings. A moment later they climbed the steep bank.

An old lane ran by the edge of the woods. Tall trees touched their tops above the lane. Here and there patches of blue showed through the green. Long shadows lay across the lane. Between the shadows were patches of sunlight. The stream below murmured among the rocks. And Cousin Fanny and the children walked slowly down the lane.

"I haven't seen anything yet," Billy announced.

"I haven't seen anything either," Jane replied.

"But I've heard something. I've heard a queer mournful sound twice."

"That was a dove cooing," replied Thomas. "I heard it, too. I believe it's down the lane."

They walked a short distance. Thomas stopped and said, "There it is. Look where I point in that big tree. Can't you see the dove?"

"Yes, now I see it," Jane replied. "My, what a pretty bird it is! And it has a long sharp tail."

"Can we go closer?" Billy asked. "I'd like to get a good look at the bird."

"Yes," Thomas answered. "You and Jane walk ahead. Miss Fanny and I will wait here."

Billy and Jane walked forward slowly. Cousin Fanny and Thomas sat down on a log. At length Billy and Jane were almost under the dove. Suddenly the bird flew out of the tree. It dropped on to the ground near the children. Then it fluttered along the lane. One wing hung down as if it were broken.

"Come on, Jane!" Billy exclaimed. "The dove is wounded. We'll pick it up and see what's the matter."

The dove kept just ahead of the children. Billy tried to pick up the bird several times. In a short time the bird jumped from the ground.

And on quick whistling wings it flew out of sight.
“Well, did you ever!” announced Billy.



“Can’t you see the dove?”

“That bird was wounded and lame. It could hardly flutter along. Then all of a sudden it flew away. What cured it?”

Cousin Fanny and Thomas came up the lane. Both of them were laughing heartily. Billy and Jane wondered why they laughed. Then Cousin Fanny said, "That's a wonderful trick, isn't it?"

"I didn't see any trick," Jane replied. "And what are you laughing at?"

"We're laughing at the trick," answered Thomas.

"I don't understand," Billy said. "Please tell Jane and me. What's the trick? We didn't see any."

"The dove's playing lame was the trick," Cousin Fanny replied. "Thomas and I have seen it played before. We thought you and Jane knew it was a trick. You see, you got close to the bird's nest. She wanted to take you away. So she pretended she was lame. And both of you followed her."

"Then she wasn't lame at all," Billy said quickly. "Do you mean she pretended she was lame?"

"Yes," answered Thomas. "Doves do that trick. So do some of our other birds."

"It's wonderful," Jane announced. "Exploring gets better and better all the time. Last summer we learned about protective coloring. This summer we've learned about protective

shape. The little nest looked like a knot. And the terrapin in the picture looked like a rock. Now the dove does protective motion. And she takes us away from her nest."

"Could we find the nest?" Billy asked.

"We can try," Cousin Fanny replied. "We'll walk back down the lane. She flew away from her nest. So it must be back that way."

In a short time Thomas found the nest. He pointed to it and said, "There it is. It's like all doves' nests. It's just some big twigs thrown together. Doves are very poor housekeepers."

Thomas began to climb up to the nest. But Billy said, "No use climbing up, Thomas. I'm looking right up through the nest. The nest is full of holes. The twigs don't fit together closely. There isn't an egg in it. I can see the sky through the nest."

"Never mind, Billy," Thomas answered. "I'm going to look into that nest. I've seen doves' nests before."

Billy climbed up after Thomas. Soon they sat on a limb near the nest. Billy looked down at Cousin Fanny and Jane. Then he said, "I'm mistaken again. There are two big white eggs in the nest. Jane, it is protective coloring again.

Only this time it is eggs. The white eggs don't show when you look through the nest."

They walked down the lane again. The creek still murmured below them. And the tall trees moved in the wind.



"There are two big white eggs in the nest."

"My, but it is a pretty lane," Cousin Fanny remarked.

"Yes," replied Billy. "And it is a splendid place to explore. Thomas, could you find us another nest?"

"I believe I can," Thomas answered. "I saw a green heron fly in this direction. It had been fishing in the creek."

The shady lane turned suddenly. It ran up a steep hill. And at the foot of the hill was an old orchard. Thomas grinned as much as to say, "I thought so." He pushed open a broken down gate.

He walked between the rows of apple trees. And the others followed him. Quite soon he said, "There is the nest. It's just like those we saw last summer. It is many heavy twigs laid together. I'm going to climb up to the nest."

"So am I," Billy announced. "I'm not certain about any eggs. I can see through the nest. But I thought the same thing about the dove's nest."

The boys climbed the old tree. They soon reached the nest. Billy looked and called down, "Same thing. There are four big eggs in this nest. They are pale blue, so they look like the sky. What do you think about it, Jane?"

"Some more protective coloring," Jane remarked.

"You boys better hurry," Cousin Fanny suggested. "We are some distance from camp. And it is almost time for Jack to come back."

They started for camp. The sun went under

some clouds. The tall green trees grew still. Even the stream made less noise among the rocks.

“We’d better go faster,” Thomas said. “It



“There are four big eggs in this nest.”

looks like a storm. Look how fast the clouds are flying.”

They trotted down the lane. They raced down the steep bank. They took off their shoes and stockings. Big heavy drops made little circles in the water. And a low grumbling came from

dark clouds. But they reached the camp as the storm broke.

The rain came down in sheets. The tents pulled at the tent ropes. And the lightning flashed across the sky. For fifteen minutes the rain pounded on the tents. Later the sun came out. The grass was full of sparkling raindrops. The sky grew blue once more. A big rainbow bent across the sky. The trees again made long shadows on the ground. And the stream murmured pleasantly among the rocks.

CHAPTER XII

DO WASPS PLAY BALL?

The tents were soaking wet. Everybody's clothes were damp. The wind made the damp clothing feel cold. And the camp fire had gone out completely.

Cousin Fanny suggested rebuilding the fire. So Billy and Thomas went to work. They used ten matches. Still they did not have a blaze. Thomas sat back on his heels. He shook his head and said, "We're not very good Indians. We ran into our tents when it rained. But we left our firewood out to get wet. Now we can't start the fire."

The wind grew stronger. Cousin Fanny and Jane began to shiver. They put blankets over their shoulders. Jane pulled hers tight under her chin. Then she said, "You boys may be poor Indians. But Cousin Fanny and I look like squaws. I wish my blanket was red. It would make me look more like a squaw. I'd like to have moccasins, too."

“Never mind how you look,” Billy said. “That doesn’t help the fire and we’re getting cold.”

“We can’t use any more matches,” Thomas announced. “We’ve only got five matches left. What can we do? We need a fire.”

Jack sounded the klaxon. The automobile ran down the hill. Billy and Thomas ran to meet Jack. It took several minutes to carry the bundles to camp. Thomas found the bread packed in a wooden box. He put the bread on a cot and with Billy’s ax he cut up the box.

“Now,” he announced. “I’ll have a warm fire in a short time. I’m glad Jack brought the box. I couldn’t have made a fire without it.”

“Jane,” asked Billy, “you aren’t going to roast lily seeds, are you? I’m getting tired of them. I don’t believe I’m very fond of playing Indian. I know I don’t care for Indian food.”

Everybody laughed at Billy. Jack helped Cousin Fanny unwrap the bundles. She smiled quietly. Then she said, “How about eating supper quite soon? The fire is burning brightly. It will soon be ready for the eggs. But we don’t have to cook much. We’ve got ever so many other things. I left word at home to have this

lunch ready. And Jack brought it back with him. Who says supper?"

"Hurrah!" yelled Billy. "What have you got, Cousin Fanny? And how soon can you have it ready?"

"Some of it is ready now," answered Cousin Fanny. And she handed Billy a ham sandwich. It was neatly wrapped in waxed paper.

Billy looked at the sandwich. His eyes sparkled, and he said, "My, look at it. I didn't know food could look so good. Playing Indian is all right for a while. It's fine when the sun shines. But Indians must have had a hard time in rainy weather. I'm glad I'm not an Indian." And he took a huge bite out of the sandwich.

There were plenty of sandwiches. Cold milk was on hand in bottles. A box of crisp crackers was passed around. And many fresh eggs were soon frying over the fire. Everybody was hungry. Nobody had much to say as they ate.

At length Thomas announced, "I'm done. I simply can't eat another mouthful. How about you, Billy?"

"I'm through, too," answered Billy. "This is my last fried-egg sandwich."

The wind blew stronger. The camp fire flickered and smoked. The wood smoke made

tears come in Jane's eyes. Nobody was very comfortable. So Jack suggested, "Let's stop the smoke. Boys, bring the cots out of the tent."

He set the cots on their sides. The canvas bottoms kept the wind from the fire. And at once the fire grew bright and stopped smoking. Jack grinned at everybody. Then he continued, "Now we have got rid of the smoke. So we will spread our blankets to sit on. You boys can spread them over here. The grass is about dry."

In a short time everybody was warm and comfortable. Jane put her head in Cousin Fanny's lap. Billy and Thomas stretched out on the blankets. In a few moments they were all breathing heavily. Later Cousin Fanny roused the children. The boys piled fresh wood on the fire. Then they put the cots in the tent. And everybody went to bed.

The next morning was cloudy. No rain fell. But a cloud of mist hung low. The tents were heavy from the mist. Clothing was damp and every one was uncomfortable. No one smiled or laughed. Even the fire blazed uncertainly.

After breakfast, Jack said, "We'd better pack up. We ought to go home this morning. I'm like Billy. I can play Indian in good weather. But I'm a poor Indian when it's damp."

"I'm ready to go home right now," Jane replied.

"And so am I," announced Billy and Thomas together.

The big automobile was soon loaded. At eleven o'clock they were on the turnpike. In a short time they reached Cousin Fanny's home. Dinner was on the table ready for the party. And every one was as hungry as could be.

Now and then the sun came out. But again it was dark. For some time the children sat on the porch. At length Jane said, "Let's do something. It's too bad to waste a whole day. What can we do, Thomas? Last summer you were our guide. Can't you suggest something?"

"We can't go into the woods. It's too wet," Thomas answered. "There's the barn and the loft. We might find something to explore about the barn."

"May I go, too?" asked Jack.

"Of course you can," Billy replied. "We didn't ask you. We thought you were too old."

Jack smiled. Then he laughed pleasantly. And he said, "Nobody ever gets too old to go exploring."

"That's just what the Captain in the park told us," Jane replied. "He said the Colonel had

taught him to explore. And that he had explored the park for a long time."

"Let's go," suggested Thomas. "Are you going, Miss Fanny?"

"No," answered Cousin Fanny. "I'm through being an Indian for a while. I've got to see about things here in the house."

Jack and the children went down to the barn. Billy noticed some marks on the plank fence. He looked at them closely. Then he asked, "Thomas, who played base ball down here?"

"Nobody did," Thomas answered. "Why did you ask me?"

"Because here's the score on the fence," replied Billy. "Here are the marks. They've been made with a nail."

Everybody looked at the marks. There were twelve of them. They were short and rather close together.

Suddenly a brown wasp flew by Jane's ear. She jumped and squealed. The insect dropped on the plank fence. It ran down the plank to the nail marks.

Billy laughed and asked, "Do wasps ever play baseball? Do you suppose this wasp is the score keeper?"

"Watch the wasp," Jack suggested. "This may be a chance to do some exploring."

The wasp moved slowly down the side of the plank. All the while it made a buzzing noise. And it made a new mark on the plank.

"Jack, what's the wasp doing?" Jane asked.

"Haven't any idea," Jack replied. "I saw the wasp make the mark. That's all I know."

"Watch the wasp," Thomas said quickly. "There it goes into the loft. It went through that knot hole."

"I know how we'll find out," Jack said. "Thomas, you and Jane go into the loft. Billy and I will stay right here. The next time the wasp comes, we'll watch it. When it flies away, we'll yell. Then you can watch it come in. And you'll find out where it goes."

"That's splendid!" exclaimed Thomas.

Jane and Thomas ran into the barn. They climbed into the loft. In a moment they looked out of the loft door. Jane called, "Thomas and I are ready. Watch for the wasp."

Again the wasp visited the plank. Jack and Billy saw it make a new mark. Then the wasp flew away. As it flew by Jack, he called, "Look out! Here comes the wasp. It has just made a new mark, too."

The insect crawled through the knot hole. It at once flew toward the roof of the barn. The children scrambled up the pile of hay. They were anxious to see what the wasp was doing.

They found it on a gray nest. The nest was fastened to the roof by a small stem. Jane sat down on the hay. Then she asked, "What's it doing? That's its nest, isn't it?"

Thomas climbed closer to the nest. He was watching the wasp and answered, "Yes. Of course, it's a wasp nest. The nest is made of paper. But I don't know what the wasp is doing. Come up closer. You can help me watch."

"The wasp is chewing," Jane announced. "Is she eating something? Thomas, where does the wasp get paper? I mean to build its nest?"

"I don't know," replied Thomas. "I know the nests are made of paper. And I can see the wasp is chewing."

In a short time the wasp moved. It put its head close to the edge of the nest. Thomas and Jane climbed closer still. The wasp placed a wet substance on the edge of the nest. Then the insect pulled the substance quite thin.

Thomas laughed, and, turning to Jane, said, "I know. The wasp made the nest longer. And

the nest is made of paper. So the wasp was chewing paper."

"Thomas," Jane said, "don't be silly. The wasp didn't have any paper to chew. It made



"The insect pulled the substance quite thin." a mark on the fence. Then it flew up here. And it chewed something."

"Let's call Jack," Thomas suggested. "Maybe he can tell us."

Jack and Billy climbed into the loft. They sat on the hay. And Thomas and Jane told what they had seen.

"This is fine exploring," Jack remarked. "I know what the wasp did. But I'm not going to tell you three. I'm going to ask some questions."

"But we want to know," Jane insisted.

"Don't you like to explore?" asked Jack.

"Of course," Jane answered. "Go ahead with your questions."

"What do people make paper of?" asked Jack.

"Rags," answered Billy.

"Yes," replied Jack. "But what else do people use for paper making?"

"Wood," answered Thomas. Then he continued excitedly, "Now I know. The wasp wasn't keeping score on the fence. It was cutting off the soft fuzzy wood."

"Is that what it did?" asked Billy.

"And was it fuzzy wood it was chewing?" questioned Jane.

"Yes," replied Jack. "She chewed the wood fibers into rough paper and made her nest of it."

"Billy," Jane said. "Don't you remember last summer? We saw black wasps make nests of mud. Now we're watching brown wasps make nests of paper. My, but we are doing splendid exploring." 

The wasp flew out of the knot hole. The children and Jack sat on the hay. And they talked about wasps. Jane looked up at the gray nest. Then she said, "There are eight or ten holes in the nest. What are they?"

"There's an egg or baby in each one," Jack answered. "They're cells, not holes."

"What do the babies eat?" questioned Billy.

"Suppose we find out," Thomas said. "Let's climb up and watch."

They got under the nest. They looked up and saw a fat grub in each cell. Jane stood up. Her face was very close to the nest. She giggled and said, "What queer, upside-down babies. Don't they ever turn over? Do they have to stay upside down all the time?"

"Yes," replied Jack. "But you'd better sit down. The wasp will be back quite soon."

Jane sat down as the wasp came back. But it did not do any chewing. It put its head in one of the cells. At once the children got close to the nest.

"I saw her touch the baby wasp," Thomas announced. "She touched it with her two feelers. Then she put her mouth down close. Does a wasp feed its babies? I mean like birds do?"

“Yes, it does,” Jack replied. “But I didn’t know the wasp touched the babies. I wonder why?”

“Don’t know,” answered Billy. “We can try to find out.” He was quiet for a moment.



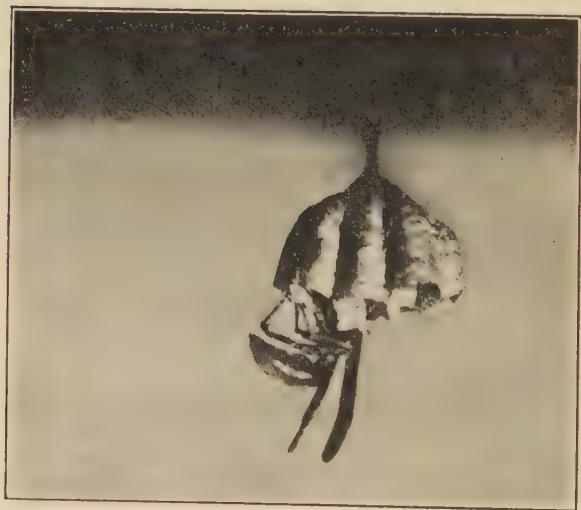
It put its head in one of the cells.

Then his face spread into a broad grin. And he continued, “I’m going to fool a baby wasp. See if I don’t.”

The old wasp had flown away again. Billy got immediately below the nest. He picked up a long stem of timothy hay. He touched one of the upside-down babies with it. At once the baby’s

mouth began to work. And its mouth grew moist.

Billy screamed with laughter. Then he asked,



“Then she put her mouth down close.”

“Did you see that? I touched the baby’s mouth. The baby thought the piece of hay was its mother. It got hungry right away. And its mouth watered.”

“I could keep on exploring all day,” Jane announced. “It’s wonderful what anybody can see. That is, if they keep their eyes going.”

Soon the loft grew darker. Thomas went to the loft door to look out. And he said, "I thought the sun was under a cloud. But the sun has set. It's almost time for supper. We'd better go to the house."

CHAPTER XIII

PLANT BABIES WAKE UP

Ten days later the children were still exploring. They had been to the swamp twice. They had paid the Pioneer several visits. They never grew tired of his collection. And they always had many questions to ask him.

One bright morning Billy and Jane were in the yard. For some time Billy was silent. At length he said, "We've got to leave soon, Jane. I'd like to stay a whole year and explore. But, of course, we can't."

"Yes, I know we have to go home," Jane answered. "You've been quiet for five minutes. What were you thinking about, Billy?"

"I was thinking about plant babies," he replied. "We didn't finish them."

"Yes we did," Jane answered. "We explored plant babies at the swamp. We saw them in lily seeds. What else was there to find out about them?"

"I don't know," said Billy. "But I was think-

ing about what Cousin Fanny said. It was when she told us about ice straws. It was during the Christmas holidays. She said she would show us how to wake up plant babies. She hasn't done it yet. Suppose we ask her about it. I'd like to wake up some of them. Wouldn't you?"

Just then Thomas whistled. He was at the front gate. In a moment he raced up the driveway. And long-legged Jack was a short distance behind Thomas.

Cousin Fanny had heard the shrill whistle. So she came to the front door. And at once she asked, "What's planned for today?"

"Nothing," answered Thomas. "Jack and I just ran over. We thought you might be planning to do something. What do you want to do, Billy?"

"Jane and I were just talking," Billy answered. "We were talking about waking up plant babies. Cousin Fanny said something about it last winter. It was when she told us about ice straws."

"Yes," said Jane. "We'd like to see some baby plants waked up."

"All right," Cousin Fanny replied. "I hadn't forgotten my promise. Jack and I have been planning. He knows ever so much about plant

babies. He is studying agriculture in college. He's going to be a farmer. And farmers have to know how to wake up plant babies."

Jack laughed at what Cousin Fanny said. Then he explained, "Yes, Miss Fanny and I have been at work. She knew Billy and Jane would ask questions. So we're ready for you to explore some more."

"Are we to see some plant babies wake up?" asked Jane.

"Yes," Jack answered. "I've got some just waking up. I have a good many wide awake. Would you like to see them?"

"Why, of course, we would," Billy replied. "Where are they? Can we see them right now?"

"Come on. Follow me," Thomas announced. "I'll guide you to them. But Jack will have to explain things."

Jack and the children followed Thomas. He led them to an old tool house. Before Billy and Jane entered, Jack gave them a few grains of corn.

"What shall we do with the corn?" Billy asked.

"Nothing," answered Jack. "Just hold the grains in your hands. I am going to ask you some questions. And they are about pond lilies.

You remember the fat seeds. Each one had a baby plant in it. The baby was green. And the other part of the seed wasn't hard."

"Yes," answered Jane. "We remember that. We explored a lot of seeds. And we saw the baby plants."

"Well," continued Jack, "did the lily seeds stay soft? And did the baby plant stay green?"

"No," replied Billy, quickly. "Some of the seeds were ripe. They were real hard on the inside. And the baby plant was almost white, too."

"What would wake up that baby plant?" questioned Jack.

Billy and Jane looked puzzled. Jane rubbed her head for a moment. Then she began, "I don't—" She hesitated. Then she continued hurriedly, "I believe I know. Springtime would wake it up. Seeds, all kinds of seeds, grow in the springtime."

Jack smiled quietly at Thomas. Then he said, "Thomas, Jane is on the right track. Yes, plant babies wake up in the spring. How about the plant babies you have in your hands? They didn't wake up last spring. What was the matter?"

"They couldn't," Billy announced quickly.

"They didn't have a chance. You didn't plant them in the ground."

"It's summer now," Jack replied. "Spring-time is gone. Suppose I planted the corn now. Would the baby plants wake up?"

"Yes," answered Jane, "if the ground was damp."

"And if the weather was warm," Billy suggested.

Jack opened the door to the tool room. Several bottles of water sat on a table. Vegetables were growing in the bottles. There was also a bread-and-butter plate on the table. And a piece of wet blotting paper covered the plate.

Jack lifted the blotting paper. Grains of corn lay on a second piece of blotting paper. And the second piece was wet. A small green sprout showed itself on each grain.

The children looked at the grains of corn. Billy touched a grain with his finger. At once he said, "This grain has gotten fat and soft." He opened his hand. The grains in his hand were hard and thin. Billy looked puzzled. Quickly he asked, "Jack, can I taste the fat one? The one that's soft?"

"Yes," answered Jack. "Go right ahead. Do

all the exploring you want to. That's what you are out here to do."

First Billy put a hard grain between his teeth. He crushed it and chewed it up. He



A small green sprout showed on each grain.

smiled knowingly. Next he picked up a soft grain. At once it went between his teeth. The moment he tasted it, he said, "I've learned something. I mean I've learned two things."

"What are they, Billy?" asked Jane. "I'd like to know."

"The fat grain is very soft. And it tastes

sweet. The grain in my hand is hard. And it isn't sweet one bit," explained Billy.

"Look at the grains together," suggested Jack. He put them on his finger. The soft



The soft grain was twice as fat as the hard grain.

grain was twice as fat as the hard grain.

"Did the wet blotting paper make the hard corn get soft?" Jane asked.

"Yes," replied Jack.

"Did the moisture make it get sweet?" questioned Billy. "And does the wet ground do the same thing? I mean when it's warm enough?"

Before Jack could answer a question, Billy exclaimed, "Wait a minute! Let me see something." With a knife he split open a hard grain of corn. Then he cut a soft grain in two. He placed them on the table. And a very broad grin spread over his face.

"The baby in the hard grain is asleep," he said. "It's almost white. And the food about the baby is hard. Jack put a hard seed in wet blotting paper. Then the seed swelled and got soft. At the same time the baby began to get green again. Here's one where the baby is pushing out. Now do you see?"

"No," replied Jane. "I don't see anything. I don't believe you do either, Billy."

"Yes I do," answered Billy, hurriedly. "While the food in a seed is hard, the baby can't wake up. It hasn't anything to eat. But look when a seed gets soft. The food is soft and it is sweet."

Jane looked puzzled and shook her head.

"Let me explain," Jack said. "Billy is right. A sure enough baby couldn't live on dry baby food. You know the kind you buy at a drug store. But if you take the food and moisten it, then the baby can eat it."

"Then plant babies wake up when they have

something to eat?" Jane asked. "And they stay asleep when the food is too hard for them? Is that what you mean?"

"That's it," replied Jack. "It is just as simple as can be."



"It has ever so many plant babies."

"And do all plant babies wake up that way?" questioned Jane.

"Of course they do," answered Jack.

Thomas, who had been watching the children, said, "Look here! Jack has some other plant babies growing. He waked them up so you could

see them. Here's a big sweet potato. It has ever so many plant babies. People call them eyes or buds. And there's enough food in the potato



"Every onion has a baby plant in it."

to feed the babies. I mean until they can take care of themselves."

Jane picked up a bottle. She looked at the small onion in the top of the bottle. At length she

said, "And so every smelly onion has a baby plant in it. Look at this, Billy. The baby has waked up. It's growing fast. And there's nothing but water for it to use. There isn't a bit



"Inside you can see the green baby."

of ground. Oh, yes, that's the way bulbs grow in water. Jack, does a bulb have enough food to grow a big plant?"

"Of course," replied Jack. "I'm going to cut the onion open. Inside you can see the green baby. Besides you can see how much food there

is for the baby. It will eat up the whole onion.”

“My,” said Jane, “but you do know ever so much, Jack.”

Jack laughed and replied, “Not much, Jane. I’m just exploring a little bit. Of course, I’ve lived longer than you have. So I have more pictures in my mind. All you and Billy will have to do is to keep on exploring. And, of course, you’ll have to use your eyes.”

“We’ll be certain to do that,” Billy announced.

They passed the garden on the way to the house. Jane looked at the wire fence. Pole beans covered the fence and had gone to seed. Jane pulled a pod and opened it. Several seeds rolled into her hand. She looked at them carefully. Then she looked at the pods thick upon the vines.

“What a lot of plant babies,” she said. “Every baby plant is wrapped up with food to start it growing. All of them waiting until spring-time. Then the hard food will change to soft food. And the babies will wake up and begin to grow.”

“Isn’t it wonderful?” answered Billy.

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CHAPTER XIV .

TWO FILMS ARE TESTED

“Two whole days of rain,” Jane announced. “Isn’t it too bad?”

“Yes, it is,” answered Billy. “And we had planned for such a good time.”

“The paper made a mistake,” Jane continued. “It said clearing today. I do wish it would stop raining. I’d like to have our last day a good one. Wouldn’t you?”

The children walked to the window. The rain had stopped, but the ground was soaking wet. They ran out on to the porch. The sun peeped out from behind dark clouds.

“Hurrah!” yelled Billy. “It’s going to clear off after all. The paper didn’t make a mistake. What shall we do, Jane? We have just this one day left. Let’s make it a splendid one.”

“Cousin Fanny might tell us something to do,” Jane suggested. “And we might ask Thomas and Jack to come over.”

They found Cousin Fanny in the house. Both children asked questions at the same time. Cousin

Fanny put her hands over her ears. And the children stopped talking.

“Are Thomas and Jack to come over here?” Cousin Fanny asked. “If they are, I have a splendid plan for today.”

“I’ll call them right now,” Billy announced. He ran to the telephone in the hall. In a few moments he came back and said, “They’ll be over in ten minutes. Come on, Jane. We’ll meet them at the front gate.”

Half an hour later Cousin Fanny explained her plan. She said, “Of course, Billy and Jane want to do some exploring. I’m anxious to know how well they use their eyes. And I’d like to test the films they make.”

“Is it an examination?” Jane asked.

“No and yes,” Cousin Fanny continued. “It will be an examination. But it will be a different kind. Not like the ones you have at school.”

“But what are we to do?” questioned Billy. “We haven’t any time to lose.”

“Here’s the plan,” Cousin Fanny said. “Jack is to be Billy’s guide. Thomas will be a guide for Jane. Each party is to be out three hours. Each party is to explore something new.

“At the end of three hours be back here. Then

Jane will tell what she and Thomas have seen. She will run the film she has made. And Billy will tell what he and Jack have explored."

"Is that your examination?" Billy asked.

Cousin Fanny nodded her head. Then she said, "I wonder how clear your films will be?"

The boys and the girl ran rapidly down to the gate. Cousin Fanny waved to them as they ran. She yelled, "Good luck and be back on time!"

Jane and Thomas cut across a wide field. The field lay between the road and the trolley line. Jack and Billy ran down the road toward Jack's home. And Cousin Fanny smiled and closed the front door.

Three hours later both parties were back. Jack and Billy were wet to their shoulders. Thomas and Jane were almost out of breath. Cousin Fanny had seen them coming up the drive. So she sat down by them on the porch.

"I believe I'll let Jane try first," Cousin Fanny said. "She can try to focus her film on the screen of her memory. And tell the story quickly. Slow stories don't interest anybody. Rapid stories are the very best kind."

"Thomas and I ran into the big field," Jane began. "We got halfway across it. Then we stopped to watch a sparrow hawk. It was flutter-

ing its wings ever so fast. It stood still in one place in the air. And I asked Thomas why it stood still. He said, 'The hawk is looking for field mice. That's the way the hawk hunts for his dinner.' The hawk saw us and flew away at once.

"We came to the trolley line and climbed the fence. Then we had to wait, as a trolley car came by. The conductor waved his hand at Thomas. The car stopped and went on to a long switch. The conductor again waved his hand. And we heard him call, 'Come over here. I've got something to show you.'

"Of course, we ran down the track. The conductor asked Thomas, 'What are you two hunting for? I'll bet it's birds or nests. I've heard people talk about you and Miss Fanny.'

" 'Yes,' replied Thomas. 'We're out exploring. What made you ask?'

" 'Because,' the man said, 'I want you to explore this trolley pole.'

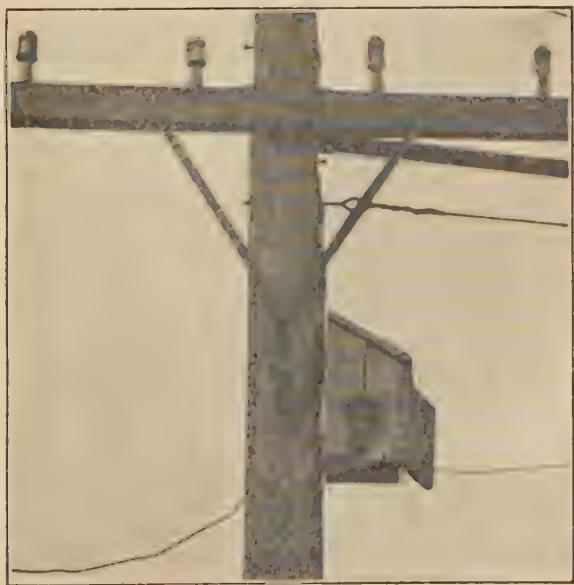
"Thomas and I thought he was joking. But he continued, 'I've been watching the pole for some time.'

"We looked at it. It looked like any other trolley pole. ✓ But it did have a sign 'Cars Stop Here' on it. At last I looked up at its top. There



"I want you to explore this trolley pole."

was a small box for the stop signal light. And I could see a few straws sticking out of the little box.



“A few straws sticking out of the little box.”

“‘Is that a nest up there?’ I asked the conductor.

“‘It is,’ the big man replied. ‘It’s been there all summer. I saw a pair of English sparrows build it.’”

"Then I asked, 'How about the light? Doesn't it frighten the birds?'"

"'Not at all,' the man answered. 'Seems as if it would, too. I'm going to turn the switch. That's the way people stop the cars at night.'"

"The man pushed the handle. The electric light burned bright. We could see it through the straws in the nest. But no birds flew out at all."

"Thomas and I wondered all the way home about English sparrows. They don't seem to be bothered by lights. Even a warm glaring light in a nest doesn't frighten them."

Jane looked about her. She moistened her lips. Then she said, "I believe that's all, Cousin Fanny. It wasn't hard at all."

Cousin Fanny smiled and said, "I told you so. I told you last winter that it was easy to tell stories. That is, of course, if you have good pictures or films."

Cousin Fanny looked at Billy. She glanced down at his wet clothes. And she asked, "Yours is a creek or a swamp story, isn't it? Go ahead, Billy."

Billy grinned and moved forward on the edge of the porch. Jack slapped him on the back and said, "Hurry along. It's almost dinner time."

"All right," replied Billy. "I'm starting."

When we left the gate, we went to Jack's home. Jack thought we'd better explore the swamp again. He said we'd find something interesting. So we went over in the automobile.

"We didn't go where the lilies grow. We went to the other end of the swamp. We found fresh tracks of muskrats in the soft mud. It made me feel like a real backwoodsman to follow the tracks. Every now and then we'd find what the muskrat was after. At one place it ate the roots of cat-tails. At another place it had gone into a cornfield to find something.

"I asked Jack to let me follow the tracks. I did follow them for some distance. Then the tracks stopped and they went into the water. I turned and looked. There was a path in the water. It was just as plain as a cow path in a pasture. I asked Jack what it was. He said explorers must find out for themselves. So we followed the path.

"We waded farther and farther out. Once or twice I stopped to look at the path. It was just clear water, and on either side the green weeds grew. The path was kept free of weeds by muskrats swimming in and out of the swamp.

"Pretty soon the water was over my waist. I thought we ought to go back. But Jack pointed

to some trees. Then he said, 'Look at the bunch of trees. The path goes right to them. I believe we can find something there, don't you?'



“There was a path in the water.”

“There was a pile of something among the trees. We waded deeper and deeper into the water. The water was soon up under my arms. We found the pile made of cat-tails and drift-wood. It was three feet high and four feet

across. I looked all around the pile and climbed to the top of it.

“At last I asked Jack what the pile was. He laughed and just said, ‘Guess.’

“I looked at the pile again. Then I looked at the path in the water. And I answered, ‘A muskrat’s home?’

“Jack nodded his head. A moment afterward he walked around the pile. He looked at me and smiled. ‘Wait right here,’ he said. ‘I’m going out to the bank. I want to get a sharp stick. I’ll be back here in a few moments.’

“He soon waded back through the water. Over his shoulder he carried a sharp stick. With it he began to cut into the house. As he worked he said, ‘I wonder if I’m right?’

“‘Right about what?’ I asked him.

“‘Oh,’ he answered, ‘I wondered if anybody was at home.’

“‘But the muskrats would leave,’ I suggested. ‘They’d hear you cutting into their home.’

“‘Wait and we’ll see,’ Jack replied. And he kept on cutting into the home. In a short time he had a small hole in the home. He put his ear down to the hole. And he smiled and said, ‘I thought so. I thought so.’

“‘You thought what, Jack?’ I asked. ‘Are the muskrats in there?’

“‘No,’ he replied. ‘But their babies are at home.’



“‘They were two queer, fat, blind, little rascals.’”

“In two minutes the hole was much bigger. Then we could see the babies. They were two queer, fat, blind, little rascals. Where they lay was high and dry above the water. It was a bed of cat-tail blades.

“We took them out to look at them. They

cried a little bit in very tiny voices. When we put them back they went to sleep almost at once.

“Of course, we closed their home again. Then we waded back along the path in the water. And it was time to hurry home.”

The dinner bell rang. Everybody went into the dining room. For some time no one said a word because everybody was hungry. When the salad was on the table, Cousin Fanny said, “Exploring is over again. And I’m sorry.”

“You’re not half as sorry as we are,” Jane said.

“No, I’m certain you couldn’t be,” Billy announced.

“But you’ve got ever so many pictures and films,” Cousin Fanny remarked.

“And you know how to use them,” Jack suggested.

“Yes,” said Thomas. “You can tell stories from them. If you told those today, you can tell them again. And you can tell others, too.”

“I believe I could almost write one of them,” Jane said.

“I’m certain you could,” Cousin Fanny suggested.

“Do you mean at school?” Billy asked quickly.

“Yes. Why not?” Cousin Fanny asked.

“Well, I’m going to try,” Billy announced. “We can have fun in doing it. Can’t we, Jane?”

“Yes, we can,” Jane answered. She got up from the table. Walking to the window, she said, “It’s good-by to exploring for a long time. But we’ve got our pictures.”

“Yes,” said Billy. “And we’ve got our screen of memory, too.”



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